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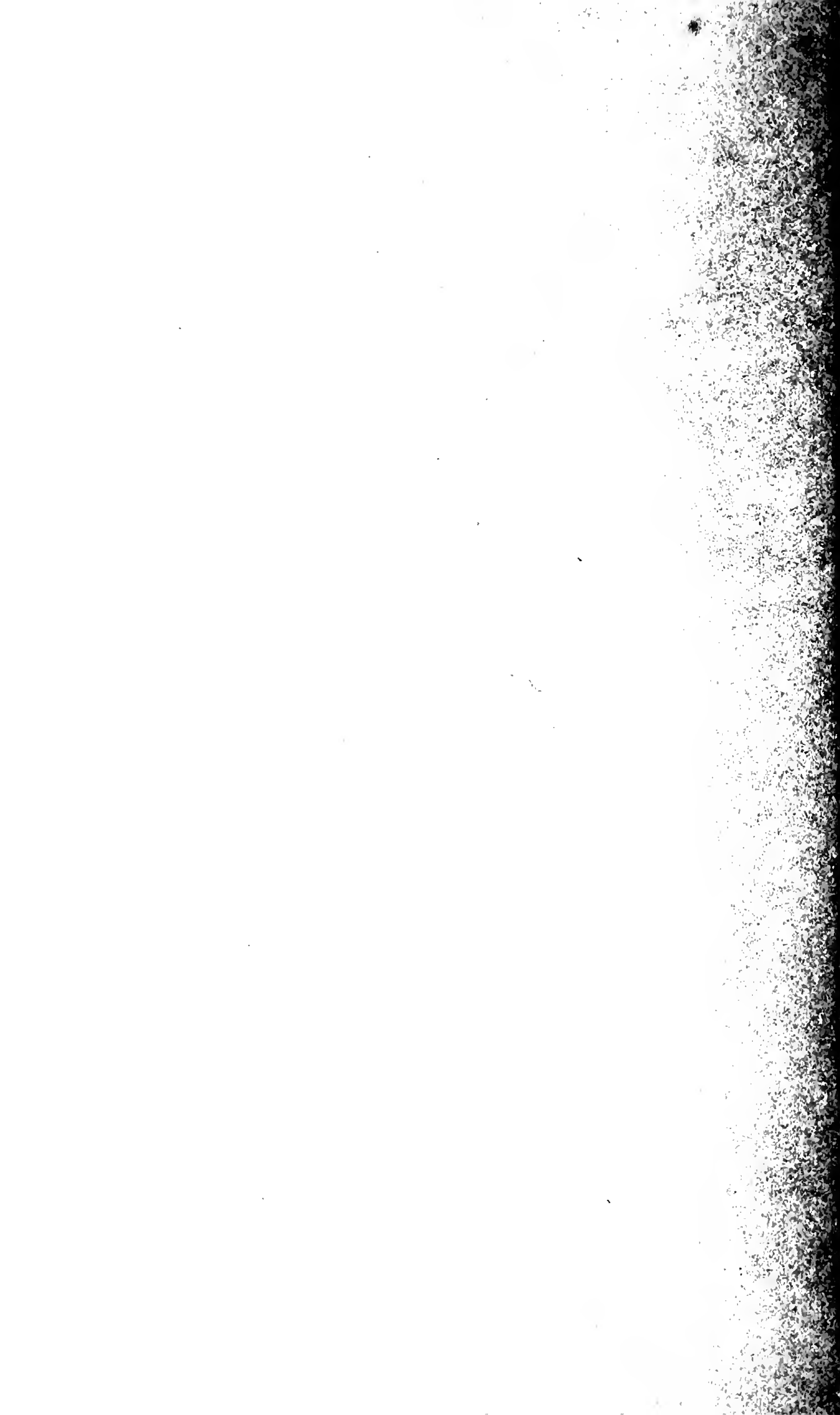
Proceedings of Conference on Better Care for Mothers and Babies

Washington, D. C.
January 17 and 18, 1938

Children's Bureau Publication No. 246
United States Department of Labor



UNITED STATES DEPARTMENT OF LABOR
FRANCES PERKINS, Secretary
CHILDREN'S BUREAU—Katharine F. Lenroot, Chief

Proceedings of Conference on Better Care for Mothers and Babies

Held in Washington, D. C.
January 17–18, 1938

Bureau Publication No. 246

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LETTER OF TRANSMITTAL

United States Department of Labor,
Children's Bureau,
Washington, June 30, 1938.

Madam: There is transmitted herewith the Proceedings of the Conference on Better Care for Mothers and Babies, called by the Children's Bureau with your approval and held in Washington, January 17 and 18, 1938.

Soon after the creation of the Children's Bureau mothers began writing in about their problems related to childbirth, and the Bureau undertook to find a plan by which mothers living in remote places could secure medical and nursing care.

The Children's Bureau study of maternal mortality in 15 States and similar studies made in various localities have shown that a large proportion of the maternal deaths and deaths of newborn infants that occur in the United States are preventable. Experience under the Sheppard-Towner Maternity and Infancy Act from 1921 to 1929 and since 1936 under the maternal and child-health program of the Social Security Act has made it increasingly evident that a courageous attack must be made on the problem of providing adequate medical and nursing care for the mother and child at the time of birth and during the prenatal and postnatal periods.

The conference attendance and the active discussion that took place are indicative of the widespread public concern over our present inability to make available to all mothers and newborn infants in the United States the professional knowledge and skill necessary to save their lives and protect their health.

Respectfully submitted.

Katharine F. Lenroot, *Chief.*

Hon. Frances Perkins,
Secretary of Labor.

CONFERENCE PLANNING COMMITTEE

Chairman, Mrs. J. K. PETTENGILL
Vice Chairman, FRED L. ADAIR, M. D.
Secretary, Mrs. NATHAN STRAUS

American Academy of Pediatrics: Henry F. Helmholz, M. D.; Clifford G. Grulee, M. D.
American Association of Medical Social Workers: Ruth Emerson.
American Association of University Women: Esther Cole Franklin.
American College of Surgeons: Malcolm T. MacEachern, M. D.
American Committee on Maternal Welfare: Fred L. Adair, M. D.
American Dental Association: Alfred H. Walker, D. D. S.
American Federation of Labor: Fred Hewitt.
American Federation of Teachers: Mrs. Nancy Smith.
American Gynecological Society: Richard W. TeLinde, M. D.
American Home Economics Association: Mrs. Katherine Van Aken Burns.
American Hospital Association: Robert E. Neff.
American Legion: Emma Puschner.
American Medical Association: W. W. Bauer, M. D.
American Medical Women's Association: Margaret Nicholson, M. D.
American National Red Cross: I. Malinde Havey.
American Nurses' Association: Ida F. Butler.
American Pediatric Society: Kenneth D. Blackfan, M. D.; Harold Stuart, M. D.
American Public Health Association: A. T. McCormack, M. D.; John L. Rice, M. D.; Reginald M. Atwater, M. D.
American Public Welfare Association: Gertrude Sturges, M. D.
American Social Hygiene Association: William F. Snow, M. D.
Associated Women of the American Farm Bureau Federation: Mrs. Charles W. Sewell.
Association of Junior Leagues of America: Lucia Murchison.
Chicago Maternity Center: Joseph B. De Lee, M. D.
Child Welfare League of America: C. C. Carstens.
Committee on Industrial Organization: Sidney Hillman.
General Federation of Women's Clubs: Mrs. Roberta Campbell Lawson.
Maternity Center Association: Hazel Corbin.
National Congress of Parents and Teachers: Mrs. J. K. Pettengill.
National Consumers' League; Emily Sims Marconnier.
National Council of Catholic Women: Agnes G. Regan.
National Council of Federated Church Women: Mrs. Frank A. Linzel.
National Council of Jewish Women: Mrs. Nathan Straus.
National Council of Parent Education: Edna N. White.
National Education Association: Lida Lee Tall.
National Federation of Business and Professional Women's Clubs: Ellen C. Potter, M. D.
National Grange: Mrs. Dora H. Stockman.
National Health Council: Donald B. Armstrong, M. D.
National Medical Association: Numa Adams, M. D.
National Organization for Public Health Nursing: Dorothy Deming.
National Tuberculosis Association: H. E. Kleinschmidt, M. D.
National Urban League: T. Arnold Hill.
National Women's Christian Temperance Union: Mrs. Ida B. Wise Smith.
National Women's Trade Union League: Elizabeth Christman.
State and Provincial Health Authorities of North America: R. H. Riley, M. D.; Felix J. Underwood, M. D.
United States Public Health Service: C. E. Waller, M. D.
Young Women's Christian Associations, National Board: Mrs. E. E. Danly.

FOREWORD

Early in 1937 the Children's Bureau Advisory Committee on Maternal Welfare met to consider problems revealed in connection with work done under the Social Security Act by the State and local health agencies during the first year of cooperation between the Federal and State Governments in extending and improving maternal and child-health services. The committee unanimously agreed that the extension of the program to permit care of women at childbirth is an outstanding necessity and drew up recommendations to this effect. These were unanimously endorsed and referred to the Chief of the Children's Bureau by the Advisory Committee on Maternal and Child-Health Services and by the General Advisory Committee on Maternal and Child-Welfare Services through which members of organizations concerned with child welfare, including professional groups, serve in an advisory capacity to the Children's Bureau. (See appendix 5, p. 168.)

In April 1937 a joint committee of the State and Territorial health officers and of the State and Provincial Health Authorities of North America drew up recommendations of similar intent which were approved by the conference of State and Territorial health officers. (See appendix 6, p. 170.)

The recommendations presented covered two aspects of maternal and child care, namely, (1) increased and improved maternity care and care of the newborn, and (2) a program of training in these fields for physicians and nurses. In presenting these proposals the committee placed emphasis on the necessity and the desirability of cooperation with the National, State, and local medical societies in the working out of such plans.

After considering the recommendations laid before her the Chief of the Children's Bureau called a small conference (October 19, 1937) of representatives of national organizations to consider the next steps to be taken. It was the sense of this conference that a larger and more representative group should be called in conference in January 1938 to discuss the needs known to exist and the measures that should be taken to meet these needs.

A committee representing 46 organizations was appointed to assist in making plans for the conference. (See p. VI.) The officers of the committee were Mrs. J. K. Pettengill, chairman; Fred L. Adair, M. D., vice chairman; and Mrs. Nathan Straus, secretary. A steering committee composed of these officers and Dr. Reginald M. Atwater, Milt Campbell, Elizabeth Christman, Raymond W. Cooke, Hazel Corbin, Dorothy Deming, Mrs. Roberta Campbell Lawson, Edward S. Lewis, and Dr. Robert H. Riley met with representatives of the Children's Bureau on November 6 and December 11, 1937, to prepare plans for program and arrangements. The conference plan-

ning committee was consulted by correspondence in regard to the plans and the committee met at noon on January 17, 1938, to consider matters relating to the conduct of the conference.

The Conference on Better Care for Mothers and Babies was called to meet January 17 and 18, 1938, in Washington by the Chief of the Children's Bureau of the United States Department of Labor. Its object, as stated in the call, was to consider the existing resources for the care of mothers and newborn infants in the United States, the extent to which maternal and infant mortality may be reduced, the measures successfully undertaken in certain localities and among certain groups, and the ways by which such services may be made available everywhere.

As a background for the conference information concerning the maternal and infant death rates in the United States, early efforts to reduce the hazards of maternity and infancy, and the maternal and child-health services administered by the Children's Bureau under the Social Security Act, was sent to those invited to attend.

The conference met in the auditorium of the United States National Museum and, on the morning of January 18, in the East Room of the White House. The total registration was 481, including representatives of 86 national organizations, professional associations, and health and social agencies; Federal, State, and local health officials; State welfare directors; chairmen of State advisory committees on maternal and child-health services; chairmen of maternal-welfare committees of State medical societies; presidents of State pediatric societies and of State nurses' associations; and others actively concerned with the problems of maternal and infant care.

Four committees were appointed to serve the conference: (1) Committee on professional resources, Robert L. DeNormandie, M. D., chairman; (2) committee on community resources, Felix J. Underwood, M. D., chairman; (3) committee on resources of citizens' groups, Harriet Elliott, chairman; and (4) committee on findings, Fred L. Adair, M. D., chairman. The four committees met on the evening of January 17 and presented their reports at the final session of the conference January 18. They were accepted and made a part of the proceedings of the conference.

The conference recommended that provision be made for a continuing committee, the chairman to be appointed by the chairman of the conference and the chairman of the conference planning committee, with the hope that the organizations represented in the conference would appoint representatives to serve on the committee. The function of the committee was described as that of giving a clearance service to the participating organizations, providing the organizations with material for study, and assisting in the effort to increase public interest in better care for mothers and babies. It was suggested also that the committee consider the legislation which it might deem necessary to advance this work and, when such legislation had been prepared, provide a means through which organizations endorsing the legislation might act in supporting the measure.

The committee on resources of citizens' groups recommended that the material presented at the conference be made available as soon as possible to the participating organizations and urged those organizations immediately to study the evidence presented on the need for better care for mothers and babies and consider what action should be taken. The committee reports and some of the speeches were mimeographed and distributed soon after the conference.

After the conference closed on January 18 the reports of the committee on findings and of the other three committees were presented to the President at the White House by Katharine F. Lenroot, Dr. Fred L. Adair, Dr. Martha M. Eliot, Mrs. J. K. Pettengill, Mrs. Charles W. Sewell, and Dr. Felix J. Underwood.

Conference on Better Care for Mothers and Babies[1]

Monday, January 17—Morning Session

Katharine F. Lenroot, Chief, Children's Bureau, United States Department of Labor, presiding

Opening Statement

The CHAIRMAN. The reason for this conference lies in the excessive loss of maternal and infant life. If we add together the deaths of mothers from causes associated with childbirth, the stillbirths, and the deaths of infants under 1 month of age, we have a total mortality second only to the mortality from heart disease and exceeding the mortality from cancer.

We have made great progress through the years in the reduction of the general infant mortality rate, but little progress, comparatively speaking, in the reduction of deaths of infants under 1 month, none at all in the reduction of deaths in the first day of life, and little progress in the reduction of maternal deaths. We have known for 20 years that this constituted a very grave public-health question, a question fraught with significance comparable to that ascribed to no other public-health issue, because it is concerned with the preservation and the vitality of the coming generation.

I shall review a little later some of the steps that have been taken and some of the pioneers who have blazed the way, without whose efforts this conference would have been impossible. Some of these pioneer leaders in the campaign against maternal and infant mortality are here on the platform, many others are in the audience, and their presence gives us courage to go ahead.

It was only with the approval of the Social Security Act on August 14, 1935, that it was possible for the Federal Government again to resume cooperation with the States, which had been in abeyance since 1929 when the maternity and infancy act—the Sheppard-Towner Act—terminated. Under the provisions of the Social Security Act, which made available on an annual basis some $3,800,000 for grants-in-aid to the States for the protection of the health of mothers and children, all the States, the two Territories, and the District of Columbia, with which we were authorized to cooperate, have developed their programs under plans approved by the Chief of the Children's Bureau in accordance with policies developed with the aid of advisory committees and receiving the approval of the Secretary of Labor.

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[1] The views expressed in the papers and discussions of the conference are those of the individual speakers, for which the Children's Bureau does not take responsibility.

The progress that has been made in this 2-year period is due to the devotion, the initiative, and the vision of the State health officers, the State directors of maternal and child hygiene, and the other leaders in the States, together with representatives of various groups through which citizens find it possible to express their interest in public questions, including members of the professions, above all the medical profession, to which we must look, of course, for the technical leadership and skill that will make our goal possible of achievement.

Last spring the Bureau's Advisory Committee on Maternal Welfare, meeting in Washington, canvassed the progress that had been made during the little more than a year in which funds had been available for maternal and child-health work, reviewing the parts of the program that were beginning to be carried out fairly adequately and the major gaps that existed. As a result of its deliberations, the committee drew up certain suggestions that were later presented to the advisory committees of the Children's Bureau in meetings held during the first week of April 1937, and were unanimously approved by the Advisory Committee on Maternal and Child-Health Services and later by the General Advisory Committee on Maternal and Child-Welfare Services.

Similar recommendations for the extension of the program, relating particularly to that period of greatest need—the period when the mother gives birth to the baby—were adopted in April 1937 by the State and Territorial health officers.

The Children's Bureau General Advisory Committee on Maternal and Child-Welfare Services, in laying before the Children's Bureau its recommendations, requested the Chief of the Bureau to explore the possibilities of making them effective.

During the next few months, we on the staff, in consultation with many others, investigated these possibilities. In October we took counsel with a small group representing the medical profession, the nursing profession, and citizens' groups interested in the problem. We have always been aware in the Children's Bureau, from the time it was founded, that we can go forward only as we march in step with the developing awareness of the American people of the needs and the ways in which they may be met. The associations of the American people dedicated to promoting citizenship, public health, and public welfare were the logical sources of counsel on this subject.

The conference in October considered the recommendations of the advisory committee and recommended that the Children's Bureau call a larger conference in January to explore these questions further, not only from the point of view of government and what government at each level might do, but also from the point of view of all the resources of the country that might be mobilized to meet more effectively, through individual effort, through medical practice, through education, and in many other ways, the challenge that the high maternal and infant death rate presents to us.

The response to the invitation to this conference has been most encouraging. We have represented in the acceptances that have come to us, 86 national organizations—organizations of labor, organizations representing agricultural interests, professional organizations representing a wide range of interest, such as medicine, nursing, social

work, and then the great citizens' groups of the country, groups of both men and women. Each organization was asked to designate a few people to come to Washington to take counsel with us in regard to this problem.

Also invited were the State health officials and directors of maternal and child health, the State directors of public welfare, members of advisory committees, and outstanding individuals who are working on this problem. You have in your envelopes today a list of the people who have accepted the invitation to this conference, and the interests they represent, so that I do not need to go into detail at this time, except to express deep appreciation of this evidence of earnest conviction of the need for a major and direct attack on the problem that lies before us—an earnest conviction that our resources must be mobilized for advance toward the goal of saving the lives of mothers and babies.

You have come here, not to consider any narrow and specific measure, but to canvass the whole broad field, to exchange information, to bring to a focus, if we may, through committee action and through summary of the papers and discussions that will be presented at this conference, the outstanding facts that should be brought back to all the organizations represented and to the American public generally. Upon such facts a plan of action may be built, and in the ways in which developing experience indicates what is successful and fruitful the campaign may move forward.

This is not a body to legislate upon any particular matter. It is not a body authorized to commit any organization to anything. It is a body authorized to canvass all the experience available to date that can be summarized for our information and to take back to the organizations represented the results of that canvass and the general suggestions that the committees giving intensive consideration to the problem may make as to the ways in which this interest may be crystallized and made effective and practical measures may be developed for saving maternal and infant life.

In presenting the first speaker I wish to pay tribute to the leadership that has been given by the Secretary of Labor in those things to which the Children's Bureau and the friends of children throughout the United States are dedicated. It is interesting that in the Secretary of Labor we have not only a person who has devoted many years to the study of labor questions and the development of methods of administration of labor laws, but who also, even before she became immersed in the problems of the wage earner, has been a specialist in the field of maternal care, for she was the first director of the Maternity Center Association of New York.

That background made her particularly interested in the measures for the protection of maternal and child health and welfare proposed to the Committee on Economic Security, of which she was chairman, and it is largely due to her leadership and effort as chairman of that committee that we have today a Social Security Act, with provisions for cooperation between the Federal Government and the States in promoting maternal and child health.

It gives me great pleasure to present to you the Secretary of Labor.

Address of Welcome

By the HONORABLE FRANCES PERKINS, *Secretary of Labor*

I have the honor to read to you a letter from the President. [Reading:]

> THE WHITE HOUSE.
> *Washington, January 15, 1938.*
>
> DEAR MADAM SECRETARY: Will you convey to the delegates to the Conference on Better Care for Mothers and Babies my appreciation of their interest in the problems that will come before the conference. I rejoice that the responsible officials of the Federal Government and the States will have the benefit of their counsel in developing practical ways of providing more adequate care for mothers and infants.
>
> The Interdepartmental Committee to Coordinate Health and Welfare Activities is at the present time considering the many questions involved in conserving the health of the people and will soon present a report in which will be outlined its recommendations with respect to the next steps to be taken. Clearly, preserving the lives and health of mothers and their newborn babies is of first importance in safeguarding family life and the welfare of the whole people. I look forward with interest to the findings of the conference.
>
> Very sincerely yours,
>
> FRANKLIN D. ROOSEVELT.

And now may I say to you on my own behalf and on behalf of all of the officials of the Department of Labor, of which the Children's Bureau is a part, that it is a great privilege to welcome you here this morning, and it is a great personal pleasure to me to see you here and to know the purpose and the objective for which you have come. After so many days and so many months and so many occasions of presiding over or taking part in conferences of people who were against something, it is a great satisfaction to be a part of a conference of people who have come together because they are for something, because they want to do something about a limited program in which they have special knowledge.

I think, perhaps, it is its limited objective, as well as the fact that you are all good people, that makes this a positive program and a positive conference rather than a negative one, for we have a limited objective, a problem that we all know. We are met here to define that problem more exactly, to canvass the resources that are available for meeting that problem, and then to pledge ourselves, our organizations, and our influence to carry out a program as well as we can with what human ingenuity we have.

It is significant that here again is one of the evidences that thinking people all over this world and particularly in this country of ours, which has been so blessed, have faith in the possibilities of life. We know it is worth while for us to use our ingenuity and our talents to meet this problem courageously because we have faith in the possibilities of life on this planet. And so it is a great satisfac-

tion to have you here and to have you here for that particular purpose.

Your presence here is a sign, I think, that you share with those of us in the Department of Labor and the Children's Bureau who are charged by law with some responsibilities in this matter, a real concern over the present high maternal death rate that Miss Lenroot has described and the needless waste of maternal and infant life. It also signifies that the delegates of many organizations assembled here today at the call of the Children's Bureau welcome the opportunity of finding a way to meet the problem and to mobilize the agencies and the methods throughout the country that can provide better care for mothers and their children.

Among you I see many familiar faces and, of course, that is a great personal satisfaction to me as well as a great satisfaction to the Department of Labor—the faces of you who for many years have been working in behalf of mothers and children in whatever field your opportunity might lie. And I see, too, new faces to whom we shall some day, I think, owe the same debt of gratitude that we owe to those who have borne the brunt of these problems for many years—the faces of people who have recently enlisted in this effort and from whom we expect that fresh inspiration and vigor that any vital program must have in order to bring us nearer to a goal.

I am very glad to welcome particularly the members of the advisory committees whom I had the honor of appointing to assist the Children's Bureau in the administration of maternal and child-health service under the Social Security Act and whose interest and support have been invaluable. I am glad to welcome them and to take the opportunity of thanking them for the service they have already rendered and of hinting to them that the end of the services they will be required to perform is not yet in sight.

I am glad also to welcome the representatives of the great medical and public-health, hospital, nursing, and welfare associations and organizations that have helped to bring about such progress as we have already achieved, and to whose continued leadership we are bound to look for further achievement. With particular pleasure I welcome the representatives of the organizations representing labor, agriculture, and the civic and religious life of the men and women of America, without whose unfailing cooperation and support we should have tremendous difficulty in bringing about the application within local communities of the scientific knowledge of specialists in the field of maternal and child health. It is to these organizations that we look to be the connecting link between scientific wisdom that can be brought together at the center and the outermost post of civilization and of life on this continent.

I did have the honor, as Miss Lenroot mentions, to be the first director of the Maternity Center Association in New York City, and therefore I have watched this pattern of action in operation for many years. I think perhaps that this method of gathering together persons who represent volunteer and professional and civic organizations, for the purpose of participating with government in planning and in making effective the plans, is a part of the pattern of our American democracy that is gradually emerging—a pattern in which the people who have knowledge and experience and responsibility

take part in the administration and in planning the administration of those faculties that are given to agencies of government for the promotion of certain definite programs.

Of course it is clear that ignorance of the causes of maternal death and maternal morbidity was the general rule 25 or 30 years ago. Perhaps one of the greatest achievements of these civic and professional bodies in recent years has been the dispelling of this attitude of mind—this attitude of ignorance—toward the whole problem of maternity and infancy. The credit for this change must go not only to the professional and technical groups but to organizations such as the Maternity Center Association and to the Children's Bureau and other agencies of professional and civic work in the United States.

The early studies of infant mortality made by the Children's Bureau did much to focus national attention on the seriousness of the problem of maternal mortality. Those studies showed that infant mortality was four times as great among infants whose mothers died within a year after the birth of the infants as among those whose mothers lived for a year or more, so the emphasis early came to be put upon the problem of keeping alive the mothers of newborn infants in order to increase the chances of life of the children.

The Children's Bureau's first popular publication was its bulletin on prenatal care.

An analysis of maternal deaths published in 1917 first called the attention of the general public to the high death rate among mothers in the United States. The study of maternal deaths in 15 States, published by the Bureau in 1934, gave us much needed information on why preventable deaths had not been prevented. We have known, of course, that good medical care is essential to a reduction of the rate of infant mortality and invalidism, but we have become increasingly conscious of other factors in American life that make childbearing especially hazardous to American mothers.

The Bureau's study of maternal deaths in 15 States was undertaken to answer questions raised by directors of maternity and infancy divisions of State departments of health during the days of the Sheppard-Towner Act. The plan for the study was developed under the leadership of Dr. Robert L. DeNormandie, who is one of the many noted obstetricians here today and who for many years has been a member of the Children's Bureau's advisory committee on obstetrics.

The Children's Bureau study has been followed very closely by studies made in several of the larger cities under medical auspices. These studies not only have thrown light on the causes of maternal mortality but have aroused public opinion to demand that we initiate and apply definite measures to save the lives of the many mothers whose deaths have been proven to be preventable. But when we come to the initiation and application of these measures we encounter factors that are a part of the whole complex picture of American life. Each factor affects other factors, and we have to attack the entire problem in order to make the progress we so greatly desire to make.

There is borne in upon us the realization that the problem is not entirely one of professional knowledge and medical skill. One of the difficult problems that we have to solve is that of the economic resources available to obtain good care for mothers and babies. That

is a long and roundabout way of saying that poverty is one of the contributing factors to the high maternal death rate. I am glad to note that the program of this conference has given equal weight to the discussion of economic resources, professional resources, and community resources for good care.

Various definitions of adequate annual income prevail, but in the United States there is a general acceptance of adequacy of income as the sum necessary to support an individual or a family efficiently and in health and comfort. According to a study made in 1929 nearly 16,400,000 American families had incomes of less than $2,000 a year and, of this number, nearly 6,000,000 had incomes of less than $1,000 a year. Through the Bureau of Labor Statistics (which is also a part of the Department of Labor and whose services are available to all the other bureaus) a highly significant study has been made of family earnings in the United States. Investigations have been made in all sections of the Nation, not only as to earnings but as to the way in which these earnings are expended and have to be expended by the families of the United States.

We hear a good deal about the lower standards of living in rural communities, but this study showed us that the standards of living in urban areas are frequently as low as or lower than those in rural areas. The wage earner with an income of $1,200 to $1,500 a year—and that is a good high income, really, compared with that of the 6,000,000 families that live on less than $1,000—spends about one-third of his income for food and about 12 cents out of every dollar for clothes.

In general, the investigation of the Bureau of Labor Statistics showed that about one-third of the wage earners' families find their incomes insufficient to meet the minimum requirements of the standard of living in their community. Only about 20 percent of the American workers have telephones in their homes. This does not mean that a telephone is an essential of the American standard of living, but it is one of the first minor conveniences that people in America provide themselves with, and only about 20 percent of the wage earners have provided themselves with that convenience. That is taken more or less as a measure of the restriction that must be put upon their spending habits in other luxury fields or convenience fields. Food and rent claim so much of a low-wage earner's income that there is relatively little left for clothing, medical care, house furnishings, transportation, communications, and participation in civic life.

A study of maternal mortality in New York City, made by the New York Academy of Medicine, presented some interesting figures on maternal mortality rates in different economic groups. During 1930, 1931, and 1932 there was a total of 341,879 live births in New York City and a total of 1,520 maternal deaths. The maternal mortality rate was, therefore, 4.4 per 1,000 live births. The births occurred in four economic groups—a group in which extreme poverty prevailed, a "depressed economic" group, a white-collar group, and a well-to-do group.

The extremely poor group had 16 percent of the live births and 18 percent of the maternal deaths—a maternal mortality rate, therefore, of 4.9 per 1,000 live births.

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The depressed economic group had 45 percent of the live births and 43 percent of the maternal deaths—a maternal mortality rate of 4.2.

The white collar group had 37 percent of the live births and 38 percent of the maternal deaths—a maternal mortality rate of 4.6.

The well-to-do group had 2 percent of the live births and 1 percent of the maternal deaths—a maternal mortality rate of 3.9.

The extremely poor and depressed economic groups, according to the report of the New York study, included the majority of persons seeking admission to the free wards in the city hospital and hospitals offering free medical care. A smaller percentage of the white-collar group seeks free medical care from the hospitals, although persons in this group are unable to avail themselves of highly skilled specialists.

The difference in the results, according to this New York City report, which was made under medical auspices (and I should not think of drawing this conclusion myself; the New York Academy of Medicine drew it), may be related to the differences in the specialized ability of the physicians caring for these different economic groups, but it may also be related to economic problems, to the problem of professional training, and to the problem of the extension of community resources to make available to all who need specialized care the opportunity to come in contact with it at the critical moment.

Before the end of the present fiscal year, the United States Department of Labor will have turned a quarter-century mark. In creating this Department, Congress declared that the purpose should be "to foster, promote, and develop the welfare of the wage earners of the United States, to promote their working conditions, and to advance their opportunities for profitable employment." Ever since the beginning those who were interested in the Children's Bureau thought that its objectives came within this general definition of Congress.

Profound changes have occurred in the United States during the years since March 4, 1913, when the act of Congress creating the Department of Labor was approved. Measured in years, the period is a very brief one. Measured in profound changes in all the industrial, mechanical, and social factors that go to make up our American life, this last quarter century marks an extremely significant period. We have had the war, the post-war period, the boom period, the great depression, with tremendous expansions all through that period in the mechanical conveniences and the mechanical equipment and the mechanization generally of our daily life in the United States of America. Under democratic forms of government there must be a certain roughly outlined unity of purpose and a general sharing of ideals and objectives conducive to the general welfare of the people. A chance to develop, a chance to grow, a chance to bring up a family under better conditions—these are the desires of the millions of wage earners in our United States, and they are the desires, too, I think, for them of all the thinking people of good will in this country.

Meetings such as this Conference on Better Care for Mothers and Babies are essential for the successful working out of our democratic processes, for within this limited objective we can have a truly democratic approach to the problem of the general welfare. Other groups having other specialized knowledge can approach other limited ob-

jectives within the general pattern of the welfare of the whole. Such meetings are, therefore, an important medium by which we shape our objectives, to whose achievement the citizens of our country as a whole may contribute.

The task that confronts this group today is of great importance, the saving of the lives of mothers and newborn infants and the conservation, therefore, of the Nation's most precious resources. The Nation will look to you to find the ways by which we may join forces—the Federal Government, the States, the localities, the medical and nursing professions, the citizens' organizations, and citizens everywhere—to bring to every mother and every child in America a fair chance for life and health. If we have done that, surely we shall have served our day and generation and may trust to those who come after us to find the answers for the problems of their day.

The CHAIRMAN. That gives us great encouragement to go forward, Madam Secretary. We are deeply grateful to you and to the President of the United States for his encouraging message.

Before introducing the next speaker, I wish to present to you some of the people now on the platform. The program for this conference was developed through the aid, counsel, and suggestions of the conference planning committee, a committee on which 46 organizations are represented. The counsel of the representatives of these organizations has been invaluable to the Children's Bureau, and the officers and a small group of the conference planning committee have given hours of time to conferring with us regarding the development of the program.

The chairman of the conference planning committee, who is also the president of the National Congress of Parents and Teachers, has been so skillful and so wise in her suggestions and her guidance as to place us greatly in her debt. It gives me pleasure to introduce to you the chairman of the conference planning committee, Mrs. J. K. Pettengill.

The vice chairman of the conference planning committee is a person who for many years has been so closely associated with the Children's Bureau, as well as with other organizations interested in maternal welfare, as to make him seem one of us. He worked with us through the years that Miss Abbott was Chief of the Children's Bureau, in studies and in committee work. He is professor of obstetrics and gynecology of the University of Chicago School of Medicine, chairman of the American Committee on Maternal Welfare, which is mobilizing the resources of physicians in such a notable way in attacking this problem, chairman of our Advisory Committee on Maternal and Child-Health Services, and chairman of so many other committees that it would take the rest of the morning to name them—Dr. Fred L. Adair.

As secretary of the committee, we have had the services of Mrs. Nathan Straus, representing the National Council of Jewish Women. Mrs. Straus has sent her regrets to this morning's session; she is unavoidably detained, but she will be with us later. She has sent her very able representative, who has done so much in her own right in this cause, Mrs. Katharine Ansley.

We have with us on the platform this morning the person under whom I had the privilege of serving in the Children's Bureau for

so many years, the person who guided the Children's Bureau in its cooperative relationships with the States under the Sheppard-Towner Act, who throughout the years has been so valiant a champion of motherhood and childhood, and who continues to serve in so many, many ways—Grace Abbott.

As I said earlier in my remarks, we are privileged to have with us some of the outstanding pioneers in this movement. A person who is with us in thought, though not in physical presence, is Lillian D. Wald, who originated that wonderful nursing service so long ago in the Henry Street Settlement and who first conceived the idea of a Federal Children's Bureau.

We have with us in physical as well as spiritual presence the woman who headed the first special bureau of child hygiene in this country and who gave such steadfast service through the years, coming down whenever there was a congressional committee hearing to support Federal action for maternal and child health—Dr. S. Josephine Baker.

We have had through the years in the Children's Bureau very rich opportunities for counsel and help in so many ways on the part of the most distinguished obstetricians and pediatricians of the country. They have always responded most willingly, most enthusiastically, to calls for committee work and for individual conference, and have not hesitated to suggest things that in their opinion would advance the welfare of mothers and children even though they would involve a great deal of work for them, with remuneration only in the success of the work. Among those we think of, who are not here, are Dr. Lynch, Dr. Holmes, and Dr. McCord, who for so many years was associated with the Children's Bureau and single-handed carried on refresher courses for rural physicians in active practice. Dr. McCord is ill. We all wish that he might be with us on this occasion.

We have with us the one who first conceived the idea of that maternal-mortality study, which we are still quoting and which has been followed by other studies in a number of places, who was chairman of the Bureau's committee that steered us through that study and the report, and who is still actively associated with us on our obstetric advisory committee—Dr. Robert L. DeNormandie of Harvard.

And then we have Dr. Henry F. Helmholz, of the Mayo Clinic and the University of Minnesota, who is chairman of the Bureau's Advisory Committee on Maternal and Child-Health Services, and has done such excellent work through many years in the field of pediatrics and child health.

We have Dr. George W. Kosmak in the audience, I think, who, as editor of the journal devoted to better obstetrics, has done so much in that work and in an advisory capacity to the Children's Bureau to advance the things in which we are mutually interested.

I think it would take almost the entire hall to accommodate the people in this room who should be on the platform—distinguished pioneers and workers in this movement. We have health officers who, for many years before the Children's Bureau got actively into the program and throughout the period of the Sheppard-Towner Act, were developing the work in the States. We have directors of maternal and child health who were in charge of the development of programs under the Sheppard-Towner Act, and so many of you

who are utilizing this opportunity of giving service as simply one more step in a long life of dedication to the welfare of maternity and infancy; but I cannot go on to mention names. The others on the platform are to speak to you later in the morning, so I will not introduce them at this time.

It now gives me most unusual pleasure to introduce the next speaker, a man who, when in charge of the health department of the State of New York, never hesitated to take a courageous attitude, a statesmanlike attitude, toward the problems of maternity and infancy; who long ago enunciated the principle that care of mothers is a public responsibility and that the measure of eligibility for public care should not be merely economic need on the level of indigency but medical need, since this country has a vital stake in the quality and vitality of the motherhood and childhood of this country.

As Surgeon General of the United States Public Health Service, he has not hesitated to lend his influence in every way that he could toward the achievement of our common goal, and his advocacy and service in the campaign against syphilis, which is so closely related to the campaign for reducing maternal and infant mortality, will go down in history as one of the most dramatic and significant events in the whole history of public health in this country.

As Surgeon General he has in every way indicated his conviction that public health and maternal health and child health must move forward together, and that we should go forward together on the Federal level and the State and the local level in working comradeship for the achievement of common objectives.

The Surgeon General of the United States Public Health Service.

THE NEED TODAY

Maternal and Child Health in Relation to the Health of All the People

By Thomas Parran, Jr., M. D., *Surgeon General, United States Public Health Service*

It is a great honor and privilege to have the opportunity of participating in this historic conference, which has been called under the sponsorship of our able colleague, Katharine Lenroot. As Miss Lenroot has said, there is a very intimate interdependence between measures directed specifically toward improving maternal and child health and those directed specifically toward improving the general health. There is a similar interdependence between all public-health measures and other measures designed to promote social welfare and security.

Although this conference is concerned primarily with the health of mothers and children, let us bear in mind that all health problems are family problems and that family health is one phase of family security. In the mass, family security means social security. Better maternal and child health is or should be among the underlying purposes of any social-security measures.

Our specific efforts to protect the health of mothers and children count for little if the family income is insufficient to supply nourishing food and decent housing, if the mother's health is undermined by unhealthful sweatshop conditions or by long hours. Efforts to improve child health count for little if the child must labor in a factory with no opportunity for normal recreation and development. Similarly, community protection against impure milk and water, against the acute communicable diseases, against tuberculosis and syphilis and other preventable diseases that shatter the family well-being has a direct bearing upon child health on the one hand and upon the security of the family on the other.

For a long time this relationship between poverty and disease has been known. More recently through the national health inventory we are able to measure this relationship in exact terms. From these records it is clear that the one-third of our population ill-fed, ill-housed, ill-clothed, also is ill-provided with the opportunity for health and life. Illness among persons on relief is 68 percent higher than among those in comfortable circumstances. The case rate of chronic illness among those on relief is 87 percent higher than among those with comfortable incomes. In families on relief 1 in every 20 family heads is unable to work because of illness, while among those in comfortable circumstances only 1 in 250 is similarly disabled.

Six million people in the United States are unable to work, to attend school, or to pursue their usual activities on an average day during the winter months on account of illness, injury, or because of gross physical impairment resulting from disease or accident. Two and one-half million of these are disabled because of chronic disease and permanent impairments. The amount of medical service varies inversely with income. Physicians' services per case of illness are approximately 50 percent less for relief families than for the higher-income group.

By doing what we know how to do to improve the health of this underprivileged group, we have the best opportunity of breaking the vicious circle of poverty, ignorance, and disease. Poverty increases disease, which in turn engenders fresh poverty. Until the economists have given us knowledge wherewith to produce and distribute a national income sufficient to provide for the minimum needs of every family, we can at least provide a more equal opportunity for health.

Only a feeble start has been made toward that goal, but I would discuss with you the steps that seem urgent for us as a nation to take in that direction.

A start was made in the evolution of a national health program when the Social Security Act went into effect 2 years ago. Through grants-in-aid to States for maternal and child health, for the care of crippled children, and for general public-health work a real stimulus was given to improved health conditions throughout the country. For the first time it has been possible to appraise the health needs of the several States and communities. The amount of Federal aid now invested annually in national health represents approximately 10 percent of the total cost. The actual amount of money, less than $13,000,000, is small in comparison with what Government is spending for the end results of health neglect, for the results of untreated disease that load our pension rolls. For example, pensions and care for the syphilitic blind cost $10,000,000 a year. Institutional care of those made insane by syphilis costs $31,400,000.

The time seems opportune to expand the Federal Government's participation in a broad national health program to include more effective measures for the protection of the health of mothers and children; the organization throughout the Nation of comprehensive measures to cope with those large causes of disease and death for which science has given us weapons of unquestioned power; the provision of the additional hospitals, sanatoria, health centers, and other physical facilities that are necessary and now are lacking in many areas; and better medical services for the medically indigent and the dependent groups of the population.

Such a health program for the prevention of disease and for the better care of individuals unable to provide it for themselves will bring measurable reductions in future costs of dependency and disability. Without such measures children will need support because their mothers die needlessly in childbirth. Unnecessary deaths from tuberculosis will create additional dependent families. Poorly treated syphilitics will continue to fill our insane asylums and load our relief rolls.

The 12,544 mothers who died as a result of conditions directly attributable to pregnancy and childbirth in 1935 do not represent the whole of the loss from childbearing. In the past it seems clear that we have underestimated the size and scope of the problems, for in 1935 there were more than 60,000 babies who died within 2 weeks after birth; there were 77,119 recorded stillbirths. In other words, there occur in the country each year more than 150,000 deaths of mothers and babies, 60 percent of whom are needlessly lost because of our mismanagement of the childbearing function.

Economically, children are more valuable now than ever before. The birth rate per 1,000 of the population continued to decline from 25.1 in 1915 to an estimated 16.9 in 1935. This decline of one-third in the birth rate means that 1,046,000 fewer living babies were born in 1935 than would have been born if the rate had remained at the 1915 level.

We have an aging population. We have a population that, if present and past trends continue, will become static within three or four decades. Inevitably our gross death rate will increase. This is to be expected and is not so much a cause of concern as the continued and unnecessarily high death rates in early life from preventable causes.

The best estimates are to the effect that one-half of the 120,000 babies who died in 1935 were lost unnecessarily. At least one-half of the 12,000 mothers who died in childbirth could have been saved.

An analysis of these maternal and infant deaths shows very uneven rates. In Denver, for instance, a study has shown a death rate among babies in families of less than $500 annual income to be 168 per 1,000 live births as compared with 30 in families with incomes of more than $3,000.

In the whole country deaths from childbirth among Negro women in 1935 were nearly twice as high as among white women. There were 9.5 deaths of Negro mothers per 1,000 live births, compared with the white rate of 5.3. Negro babies died at the rate of 82 per 1,000 live births, compared with the white rate of 52. Nor has the Negro shared in the health advances of recent years. Since 1920 Negro males between 20 and 50 years of age have suffered a loss in life expectancy of 10 percent. Among every group that is economically underprivileged, preventable deaths exceeded those among the economically privileged.

For example, in the State of Michigan no prenatal care is received in 4 of every 10 pregnancies among families on relief, but those in comfortable circumstances get such care in 9 of every 10 pregnancies. Of those on relief only 26 percent get adequate prenatal care, and of those in comfortable circumstances two-thirds get adequate care. Yet medical care in Michigan is above the Nation's average.

Approximately 1,000,000 children are born each year in families on relief or with an annual income of less than $1,000. Here are found the highest death rates of mothers and of infants, here the least, and the least good, medical care. Tax funds should provide the medical, nursing, and hospital costs of childbearing for every woman unable to provide good care for herself. The greatest freedom of choice of physician should be allowed that is compatible with obtaining competent service.

Such aid would remove an immediate and grave economic barrier to bringing a child into the world. It would substitute good care under strict professional standards for the haphazard and criminally poor care now being received by so many women. Because they may not have paid the doctor's bill for a preceding childbirth or illness, there frequently is great reluctance on the part of underprivileged women to report to a physician for care early in pregnancy, especially in the rural districts and in cities in which prenatal clinics and free hospital services are not available. Moreover, unless they are entirely destitute and desperate, women shrink from going to the welfare officer for aid, because of the stigma surrounding an application for public relief. I propose that public aid for the medical, hospital, and nursing costs of childbearing be put upon the basis of the medical need rather than measured by the yardstick of a pauper's oath.

Health supervision during infancy and childhood is needed for this same group of the population. In the schools the training of children should include much more attention than we now give to proper nutrition, to full physical development, to the correction of defects, and to training in correct health habits and attitudes.

That tuberculosis is a battle half won should spur us to win the remaining half. The broad average of 56 deaths per 100,000 of the population hides rates among unskilled workers 7 times as high as among the professional groups, and among the colored in the young-adult age groups nearly 10 times the white rate. Isolation of active cases in sanatoria has been the keystone of the tuberculosis-control movement. Yet in 26 States there is less than 1 hospital bed per annual death. To provide for the whole country the accepted standard of 2 beds per annual death would require an additional 50,000 beds for the care of the tuberculous. To do the case finding, to perform skin tests, to make X-ray tests on positive reactors and on home contacts, and to utilize collapse therapy more widely will require the mobilization of tuberculosis-control forces on an unprecedented scale in whole States and sections of the country in which death rates now are high and little or no action is being directed against them. In these same areas one finds the most meager financial resources. Substantial Federal participation in this campaign is the opportunity of any administration sincerely concerned in helping the underprivileged. By a concerted national effort against tuberculosis there is reason to believe that this disease within a generation can be reduced to the present negligible proportions of typhoid fever.

Syphilis is another disease as serious as tuberculosis and even more devastating in its economic and social effects. Against it we have cheaper methods of case finding, surer methods of arrest and cure, and a method of chemical quarantine that will promptly prevent spread. Yet the battle against syphilis has just started. You who are concerned primarily with the health of mothers and children have neglected for long years this most easily preventable cause of stillbirths, of sickly, deformed infants, of broken homes. The congenital syphilis with which 60,000 babies are born in this country each year can be the first major health hazard of the next generation to be removed. To do this we need only to transfer some of the effort and cost now spent in the care of late results of syphilis to finding

early cases, sources of infection, and contacts, and to providing adequate treatment. That this must be largely a public obligation is shown in recent data collected by the United States Public Health Service. About one-half of the cases of syphilis now are treated in clinics, the other half in doctors' offices. Of those whom the doctors treat, 28 percent have an annual income of less than $1,500—insufficient, all will grant, to pay for subsistence for a family plus a complete cure. Opportunity for cure within the means of the patient is a first necessity.

Control of syphilis is a national problem. A national conference of experts last year recommended a Federal expenditure of $25,000,000—half a battleship—a year, which in my opinion would give this country greater security than the same amount spent for armaments. Let us add to this a law in every State requiring freedom from infectious syphilis as a precedent to the issuance of a marriage license. It is devoutly to be hoped also that you obstetricians can improve obstetric practice in this country to make a blood test early in every pregnancy as routine as the putting of antiseptic drops into the eyes of every newborn baby.

Only recently and in a few States has pneumonia been accepted as a public-health problem. Taking a toll of 100,000 lives each year, this disease ranks next to heart disease and cancer as a cause of death. Many of these deaths represent terminal conditions among the aged. How many are due to the pneumococcus we do not know. We do know that a large proportion of the pneumococcic pneumonias are caused by the types of organisms for which we have an effective curative serum. We do know that the death rate from pneumonia is three and one-half times as high among unskilled laborers as among professional groups. We do know that of the deaths under 1 year of age, 20 percent—one in five—are due to respiratory infections, chiefly the pneumonias. We do know that prompt typing and the use of serum for appropriate cases will cut the mortality in half. Yet in nearly every State the basic laboratory facilities to type the disease are not generally available. In all but two States, curative sera are not to be had by any except the minority of patients able to pay from $50 to $150 for this life-giving remedy. Of every two cases treated with serum one life can be saved. Is it worth the cost? Here again public provision of these essentials of life is needed on a national scale if we are to reduce the toll of pneumonia deaths.

In the control of cancer we have less exact, less effective tools. Yet before a committee of Congress last year experts testified that if all cases of cancer received the type of good treatment now available in a few cancer institutes, we could reduce the present toll by at least 20,000 annually. To do this will require a national effort. It will be necessary to establish treatment centers, to train expert staffs, to provide radiation therapy, and to make the services of these centers available to sufferers unable to pay for the expensive care required.

Persistent, coordinated, systematic research is essential to future cancer control. Congress has recognized this by establishing a National Cancer Institute under my direction, with an annual authorized budget of $700,000, to accomplish this purpose and to bring the best available knowledge to the help of the present cancer victim.

Ways and means of accomplishing these purposes are now being worked out with the help of the best scientific minds in the country.

For many other diseases, such as malaria and pellagra, we have known but have not used methods of prevention.

For others, such as acute rheumatic fever, influenza, or cancer, persistent and systematic research is the first need in order to develop effective methods of control.

In this discussion of our major national health problems and the ways of dealing with them, you will recognize an underlying theme: Good treatment and early treatment mean prevention of other cases and mean prevention of death or serious disability for the patient. In fact, one can make the general statement that prompt restoration of an individual to health is an essential part of any complete regime of prevention. Whenever any disease is so widespread in the population, so serious in its effects, so costly in its treatment that the individual cannot deal with it unaided, it becomes a public-health problem.

Better care during pregnancy and childbirth, protection of the health of children, good nutrition and sound physical development in youth, protection against the acute communicable diseases, control of tuberculosis, syphilis, pneumonia, cancer, and other catastrophic diseases—all assume an importance to the community as a whole. The taxpayer now has a financial stake in good health for all. He pays for its neglect in pensions, in relief, in institutions for the care of the end results of unprevented disease and untreated illness, and in the economic wastes of early, needless death.

I have discussed the measures needed against specific diseases and conditions of national importance. To put these measures into effect we need a reorientation of our public-health machinery. We need to build, upon the skeletal forces we now have, health organizations in every community able to cope with these new and larger health problems. We need to coordinate, to integrate, the facilities now available—hospitals, practicing physicians, dentists, nurses, social-welfare agencies; in fact, all the professions and agencies directly concerned with good health. This can be done without any basic change in our present system of medical practice. In fact, much of the public effort will be directed toward making available better tools for the use of the practicing physician as a step toward providing necessary facilities for health.

Many areas at present, however, are lacking in the basic facilities requisite to good health. I have referred to our deficiency of hospital beds for tuberculous patients. May I call attention also to the 18,500,000 of our population living in 1,300 counties in which there are no general—registered—hospital facilities whatever? We do not need a general hospital in every county, but even the minimum standard of 2 beds per 1,000 persons indicates a need for an additional 22,000 beds in rural areas.

Care of the mentally sick is still on a primitive basis in many States. Domiciliary care, little medical attention, no use being made of newer methods of treating general paresis and dementia praecox, are the rule. We need additional beds for mental patients, but more than that we need to provide a mental-hygiene program to replace the present insane-asylum attitude in the care of the mentally sick.

Such a change would in future years measurably reduce the load that now burdens all of us.

Many communities lack the laboratory aids to medical practice that modern science indicates are necessary if we are to apply present medical knowledge effectively for all the people. Public funds are needed to provide laboratory services not now available.

Local health departments typically are housed in the basements of city halls or county courthouses. The newer concept of public health can be more easily put into practice through such physical facilities as health-center buildings. Frequently these can be combined with small community hospitals. Many new post offices have been built. With Federal aid thousands of new schools have been built. Let us now provide needed hospitals, sanatoria, mental hospitals, and health centers.

Having provided services for diseases and conditions that are of particular public-health importance, and the physical facilities needed for efficient health work, there still remains the lack of general medical care for dependent groups of the population and for those in the marginal economic groups. The evidence is clear that they now get inadequate care. Yet since the time of Queen Elizabeth the idea has been written into the laws that medical care of indigent persons is a responsibility of society equal to the responsibility of providing them with food, shelter, and clothing. This idea still lacks application.

We have seen that families on relief have a 50-percent excess of acute illness and three times the amount of chronic illness experienced by those in the comfortable economic group. Others in the marginal economic groups have the next highest rate, and many of them will later be burdens to society because of preventable disease or remedial defects. Many of these illnesses are not curable with present medical knowledge, yet even for them medical care is a humane measure of relief. For a large proportion medical care will restore the patient's health and employability. The returns in reduced relief loads should be enough to pay the cost of the whole job of giving medical care to the dependent groups of the population. Again, a fundamental program seems needed to do this job—with the cost shared by Federal, State, and local budgets—which will provide general medical care for dependent groups.

Our existing structure of social security provides old-age assistance to the needy; unemployment compensation and old-age benefits to soften the impact of job loss and to prevent destitution in old age; aid to dependent children and the needy blind; and the beginnings of a preventive program in public health, maternal and child health, and services for crippled children. To this base I propose we add a real, Nation-wide, result-getting health program, which would provide—

(1) For all citizens the community measures of sanitation and disease prevention that are necessary if any of us are to be safe.

(2) For the underprivileged third of our population such specific measures of prevention and treatment as good maternal care, child-health protection, the control of tuberculosis, syphilis, pneumonia, cancer—conditions that are too important to the Nation as a whole for us to permit continued neglect.

(3) For areas without them, the physical facilities for good health, such as hospitals, sanatoria, and health centers, without which no national health program can operate effectively.

(4) For those on relief, and dependent upon public funds for the other necessities of life, a minimum standard of general medical, dental, nursing, and hospital care.

In my opinion the major cost of this program should be borne by local and State funds, with Federal assistance. The health program should be under local operation, adapted to the needs of the community, with State supervision and Federal guidance and aid, particularly to insure minimum standards and to equalize the financial burden. A program such as this costs money, large sums as compared with present expenditures for health but small as compared with the cost of continued neglect. It will be a wise investment of public funds. It will pay dividends in a more fit citizenship, a less dependent citizenship.

Up to now we have been so busy bailing out the boat that we have neglected to calk up the seams. Let us put first things first in national planning for a more prosperous nation, a more healthful nation, a sounder national economic structure.

A national program of health is essential to any national plan of rehabilitation. It will pay dividends in dollars no less than in human lives. Savings to the nation's economy will be apparent immediately. Savings over the next two decades will easily amortize every dollar spent.

May this conference draw the blueprint for a comprehensive program upon which we can build a sound structure of maternal and child health and integrate it with the whole composite of a national health program, which is essential for health security, for economic security, for the security of our democratic institutions.

As doctors we have been too closely concerned with gross pathology, too little concerned with positive health, which means much more than freedom from obvious disease. Other nations are making strenuous efforts to produce a generation fit for war. Surely we need no less a generation physically fit for the pursuits of peace.

The CHAIRMAN. The audience has expressed for me my gratitude for that stirring challenge and message, Dr. Parran.

I wish to make two or three announcements as to the plans for conference procedure before we proceed to the consideration of the next topic. As I indicated in my opening remarks, this is a discussion conference. The conference will not be asked to vote on any matters except those relating to the organization of the conference or the way in which the interest expressed in the conference may find expression after the conference adjourns.

Four committees will be set up to bring to a focus the material presented. The reports of the committees will be confined to general material within the scope of the conference. They will be presented at the Tuesday-afternoon session for your information and are to be received and made part of the record of the conference, so that the material of greatest importance may be carried back in concise form by the delegates to their organizations for consideration and such action as seems to the organizations to be indicated.

One of the committees will be the committee on findings of the conference. Material presented throughout the day and at the evening forum will be considered by the committee on findings. Any specific suggestions that delegates wish to bring to the attention of committees must be presented in writing today.

The report of the committee on findings will not be referred to as the findings of the conference but as the report of the committee on findings.

All of you have been given folders with a great deal of material. We do not expect you to study that material so carefully that you could pass an examination on it before the conference closes. We have given it to you so that you may take it home and study it at your leisure and use it as a basis for your further advice to your own organizations.

After having canvassed the general problem of maternal and child health, in relation to the health of all the people, we shall proceed to consideration of what constitutes good care for mothers and babies. We are very fortunate in having as the speaker to present the subject, from the point of view of the obstetrician, a person who probably has talked obstetrics to more students than any other professor of obstetrics now in active service. For over 25 years he has been professor of obstetrics and gynecology at the University of Minnesota Medical School—Dr. Jennings Litzenberg.

What Is Good Care for Mothers and Babies?

By Jennings Litzenberg, M. D., *Professor of Obstetrics and Gynecology, University of Minnesota Medical School*

I will now give you a lecture on obstetrics. My subject includes everything. In a few minutes I am to tell you what it takes 2 years to teach my students inadequately. However, I intend to emphasize the keynote that the Surgeon General has sounded. If I get the gist of his address, it is that we today possess the ways and means of solving the problems of public health to a very great degree. And why do we not do it? That is the keynote of what I shall say about maternal care. This is a talk not on prenatal care alone but also on maternal care.

If we would apply all the knowledge that we have of combating maternal mortality and infant mortality we would save at least half the deaths which occur. Our aim in maternal care, then, is the solution of this problem. It has been almost solved as far as learning what is necessary to do is concerned. We possess enough knowledge today—without any additional scientific knowledge, which undoubtedly will and must come—to prevent half or more, probably 60 percent of the deaths.

What are the reasons for this conference? In my short talk I want to lay them before you. What are our problems? Maternal deaths and, not least important, the falling birth rate, stillbirths, prematurity, and neonatal deaths, particularly the deaths in the first day or the first month or even the first year, which are the responsibility of the obstetricians. The medical solution is evident—simply better care during pregnancy, during the delivery, and during the most neglected period of all, after delivery.

The birth rate is falling so rapidly that it is a challenge. In 1915, when the birth-registration area was established, the birth rate was 25.1 per 1,000 population. In 1925, 10 years later, it was 21.5. In 1935, it was 16.9, just a fraction of a point more than that necessary to maintain our present population, and the only means of populating this country we have now is by birth. Immigration has practically stopped. The significance of that needs no further comment.

Maternal deaths have been reduced in this country only 5 percent since 1915. That is to the shame of the medical profession. Infant mortality during the first year of life has dropped 44 percent. The pediatricians have done a better job than we obstetricians have. They have got the support, evidently, of the general medical profession in carrying out better care of babies, and that is what this conference is for—to see if we cannot increase maternal care both in quantity and in quality.

Of the 2,155,105 infants born in 1935, 36.9 percent of the mothers were under the care of a physician in a hospital. Of course, a number of those were in the hospital because of an emergency. Therefore, that figure needs modification. And 50.6 percent of the births were under the care of a physician but not in a hospital. In other words, 87.5 percent of the women had a physician at some time during their pregnancy, and still the maternal death rate has decreased only 5 percent. Not a record to be proud of, particularly when we know that the death rate from sepsis was approximately the same at the end of the period 1915–35 as at the beginning, that infection following abortion had increased, and that deaths from hemorrhages at childbirth were practically the same. The only encouragement we get out of this is the reduction in the toxemias—the poisons of pregnancy—and in eclampsia.

The problem is, for these reasons, most urgent. The death rate becomes an economic and a national problem because this Nation must rely upon the babies for all its citizens. Therefore, it is our duty as obstetricians to preserve every pregnancy that occurs. If we ignore the sentimental reason of our love of babies, the necessity of babies in the family, and the belief that "a home without children is no home at all," but look at it entirely from the material standpoint, the economic reason for saving those babies is urgent. If they do not reach maturity, they will not provide the necessary buyers and producers of the Nation.

This talk of mine includes not only prenatal care, but also care at delivery and care after delivery. I shall illustrate certain phases very briefly. We must look at some of the sad issues, such as the 35,000 children a year who are left motherless by the unnecessary deaths of mothers.

When should prenatal care begin? Before marriage. Every young woman contemplating marriage should be examined by her physician to find out her capabilities for the purpose of childbearing. If that is not done, then as soon as she is married and contemplates having children, she should have that examination before she becomes pregnant, so that her physician may have the proper background of knowledge of her condition. There are not many, but there are in the practice of every doctor some women who should never conceive, who should never marry because of their physical incapability either to carry or to bear children.

Prenatal care must begin at once. The idea of having it begin at the third month, the fourth month, or the fifth month is all wrong. As soon as the woman suspects—even before she knows—that she is pregnant she should consult her physician, and here is the statistical reason: Twenty-five percent of spontaneous abortions occur before the third month. One of the objects of prenatal care is to prevent abortion and to prevent prematurity. Abortion means the loss of a prospective citizen. The premature baby means the probable loss of a prospective citizen. So the prevention of abortion and of premature birth is one of the functions of prenatal care.

Very few women report to physicians before the third month. Too many of them await the fifth month and too many things can happen before that time for that idea to be encouraged.

What is good prenatal care of mothers? Statistics, of course, are impossible for this purpose. However, I want you to believe that

all the statements I make have the support of figures from the Census Bureau and from 35 years of personal experience—25 years of that time spent in teaching the young medical man how to shoot, yet some of them still are not shooting very straight so far as maternal mortality is concerned.

Computed on the number of deaths of mothers actually attributable to causes connected with childbirth—that is, about 13,000 a year—4 mothers have died since we opened this conference this morning; 1 dies every 36 minutes; 40 die a day. And when one contemplates the possibilities of saving those mothers, he must feel the importance of the subject we are discussing.

There are each year 15,000 deaths of mothers from causes associated with childbirth—14,296 in 1935, to be exact; there are many more, not reported as such, as we know from studying some of the local reports. These deaths are not the only consequence. There are 77,119 babies still-born—77,000 citizens, many of them unnecessarily lost. Seventy thousand babies died in the first month of life, most of those because of obstetric conditions, and I am sorry to confess that many of them died because of errors of omission and commission by the physician.

I have just one slide that I want to show because it is a slide of the graph that shows very clearly what happens to women who are pregnant. It shows why women die and what they die of. This is a circle representing 100 percent [showing slide]. You will see that the heavy line segment represents more than two-fifths—41 percent—of the women who die. They die from puerperal sepsis; they die from infections. We have to get a little ahead of our point here. Infections occur chiefly at the time of delivery because the care has not been aseptic; if I were in an entirely lay audience I would say because the care at delivery has been dirty.

Part of the deaths are due to infections that occur during abortion. Twenty-four percent of the deaths of mothers are due to infection from causes other than abortion, and another 17.3 percent are due to infections of abortion. Of course, many of those abortions are induced—all too many of them criminally induced.

Therefore 41 percent of all the deaths of mothers are due to infection, a preventable condition in a large proportion of cases. It is not an exaggeration to say that this high percentage of 41 percent would be somewhat reduced simply by clean delivery. Those of us who are connected with teaching hospitals know that this is true, because we rarely have infections in women whose entire care has been in these carefully guarded institutions.

The total number of deaths of mothers and babies from causes associated with childbirth is nearly 150,000—to be exact, 147,677. Such a condition is appalling, but it can be altered by the proper care. It simply means being careful. To be specific, a woman should engage a physician as soon as she suspects she is pregnant. The physician then should keep a complete record of what he finds. The things that he should look into and determine are the things that he can find by general physical examination, and that does not mean simply a cursory examination but a careful examination, as, for instance, of the heart. A carefully recorded history also is necessary, because some of these young women have had severe infectious

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diseases in childhood, like scarlet fever, which may leave them with a damaged heart, sometimes unsuspected.

Of course the first duty of the physician is to determine—and it is the first thing that the woman wants to know when she becomes pregnant—is the patient fit to go through the pregnancy? Does she start out with a good body to withstand all the things that may happen to her? It is too bad for a woman to start out, as they would say at the ball park, with two strikes on her. So it is the physician's duty to find out, by an examination of the heart and the lungs, what her condition is. The examination of the lungs must be carefully done, too. That is not a cursory examination, either. She may have some lung condition; of course the most prominent illustration would be tuberculosis.

Whether her pelvis is capable of allowing the baby to pass through must be determined by measurement. It is astounding how many women go through their labors without measurement of the pelvis. This is very important. An ounce of prevention is worth more than a pound of cure. If we know the capacity of the pelvis, we shall have reduced the number of cases of hard labor—dystocia, as we call it technically—by a very great deal.

When a woman who is already in labor comes into our University of Minnesota hospital and I find that she has a contracted pelvis and has not had pelvic examinations, I feel terribly chagrined that my profession has allowed the woman to go to this time without having had her pelvis measured to find its capabilities. It may not be the physician's fault. In the majority of cases it is the patient's fault because she has not sought medical advice.

The other thing that everybody knows is that the urine should be examined. What is the significance of an examination of the urine? The patient may have albuminuria—albumin in the urine. This is a sign that she probably has a toxemia. She may go on to the point of having convulsions. Now, 21.7 percent of all the deaths are due to albuminuria and other types of toxemia. I am not giving you that for statistical reasons but to put the picture before you—that the way to save lives of women with toxemia is by early detection. An examination of the urine is necessary in order to detect the presence of albuminuria.

Blood pressure is an even more significant sign of toxemia, and the blood pressure of every pregnant woman must be taken every time she comes to the office. She must be weighed each time. These three things—taking the woman's weight, examining her urine, and taking her blood pressure—will almost certainly detect a beginning toxemia, and if they are not done the woman is being neglected. You can see by these figures that almost 22 percent of the deaths are due to toxemia, and toxemia can be prevented.

Of course prenatal care includes other things about which I shall not talk today—diet, clothing, physical surroundings, home conditions, which are quite important but which we cannot discuss at this time. A complete examination of every kind should be made, including, of course, the pelvic examination and the examination of the uterus.

The pregnant woman should see the doctor every month—that is the minimum—and oftener if any abnormalities arise, during the

first 6 months. After 6 months she should see her physician every 2 weeks, because toxemias, for example, are more apt to develop during the latter months of pregnancy. As the time approaches for delivery she should see the physician oftener and during the last month or 6 weeks, she should see her physician every week.

With this care most of the cases of toxemia will be detected. Deaths from toxemia, when it is detected early and properly treated, are very greatly reduced in number.

At each subsequent visit it is not necessary to repeat the entire physical examination, but the physician should find out the patient's general health; always ask her about the quantity of urine she is passing, because that is a prominent symptom that might signify toxemia; and ask whether she has had any bleeding or any headache. Every woman should be instructed to report certain things to the physician if they occur, particularly headaches, which may be a sign of the toxemia that we are talking about; or bleeding, which may be a sign of grave complication, like placenta previa; and any edema, or swelling, of the ankles, hands, or face.

Personally, I think that the final examination before delivery is one of the most important examinations that can be made, because at that time we can remeasure our patient, be sure that her pelvis is all right, determine the position and presentation of the baby at that time, and check all the previous examinations. The first examination and the last examination are very important. If the woman comes in just before her delivery, as she will when she comes every week, frequent vaginal examinations during delivery will be avoided. In this day and age most women can be delivered, especially if they see the doctor as I have advised just before the delivery, if only a rectal examination is made during delivery. In that way infections can be avoided or at least very greatly minimized. I have no objection to one very careful vaginal examination, but repeated vaginal examinations lead to sepsis.

The toxemias, eclampsia, and certain other diseases of pregnancy cannot be entirely prevented, but they can be detected early. That is the important thing because, if they are detected early, they can be treated, and they usually respond promptly to treatment. If they do not respond promptly to treatment then the physician can go on and institute the treatment that may be necessary, sometimes inducing an earlier delivery. A vast majority of these women can be helped, and the emptying of the uterus is not always necessary.

Coming to the question of abortions—I should have liked to spend all my time talking about abortions. You can see by these figures the very great dangers of abortions, even when the women are not infected. Seventeen percent of all maternal deaths are due to infected abortions. Looking at the lighter lines on the left of the heavy lines in the chart, you see that nearly 5 percent of the deaths are due to nonseptic abortions, so that no abortion, even a spontaneous one or a therapeutic abortion induced by a capable physician, is without its dangers. Most women believe a therapeutic abortion is not dangerous unless they are in the third or fourth month of pregnancy. They usually say there is no life in the fetus. Of course there is life from the very beginning of pregnancy, and these nonseptic abortions cause 5 percent of the maternal deaths.

Puerperal hemorrhage accounts for 11 percent of the maternal deaths.

There is one other thing that I wish to emphasize. It has been found in the New York survey, which has already been talked about, that 66 percent of the deaths in that city were unnecessary. According to other studies, the percentage of preventable maternal deaths was 57 in Philadelphia and 68 in the Pacific-coast cities. This is the conclusion reached after analysis of each case. Therefore we can safely say that 60 percent of all the women who die in childbirth could be saved. Nearly 9,000 of these 14,000 women died unnecessarily.

I have said nothing about delivery care. What is necessary during delivery care? I will just mention exact diagnosis of position and presentation, for example, so that we may know what procedures to follow, skill, judgment, patience, very careful watching of the progress of delivery, and interference only when necessary.

In postpartum care I want to emphasize only one point; that care after delivery does not cease at the end of 2 weeks. If a woman has had any complication of infection, or toxemia during pregnancy, she must be watched for weeks, months, and even years, because she must be watched until she has returned to complete health.

It is said that the measure of any civilization is its treatment of women. By this token we may be very proud of our social treatment of our women. They receive equally good education or at least they have the opportunities for a good education; politically they are equal; but of their care during their important function of motherhood we must hang our heads in shame.

The Chairman. Thank you, Dr. Litzenberg. This presentation has been invaluable to us as a basis for our considerations.

I take great pleasure now in presenting to you, to discuss the subject from the point of view of what constitutes good care of the newborn baby, an outstanding leader in undergraduate and graduate pediatric education, Dr. Horton Casparis, of Vanderbilt University.

What Is Good Care for Newborn Babies?

By HORTON CASPARIS, M. D., *Professor of Pediatrics, Vanderbilt University School of Medicine*

Since in the previous discussions we have had outlined for us very clearly the problem of better medical care, and have had pointed out some of the needs and some of the lines of attack, it might seem unnecessary to discuss the matter further. However, I feel that we should keep in mind always that any broad health program is good only if its provisions fit the individual. In other words, any program must apply to and satisfy the needs of the individual if it is to be applicable to the whole population, since the population is made up of individuals. Therefore, it seems worth while to go into some detail regarding what might be considered good care for newborn babies.

As we attempt to outline some of the principles and methods which constitute good care for newborn babies, let us keep clearly in mind the fact that we are concerned with human beings during their most helpless, most sensitive, and therefore most vulnerable period of existence as separate individuals. Hence, it should be quite evident that during this early period care should in no sense be casual, but on the contrary, should be intimate, quickly available, and carefully administered by adequately trained persons.

Since the character of the immediate needs of the individual newborn baby depends largely upon the circumstances surrounding his previous months of existence, and upon the circumstances surrounding his birth, it should also be quite evident that there should be the closest sort of cooperation between pediatrician and obstetrician. In other words, if the child is quite healthy at birth then one may anticipate little or no serious trouble if available knowledge concerning his care is applied. On the other hand, if he is handicapped at birth by previous poor health of his mother, by being born prematurely, by failing to breathe spontaneously, and so forth, then the best care can be instituted only through knowing the probable causes or background responsible for his handicaps. For example, if he did not breathe spontaneously at birth, was labor prolonged or difficult? Is it possible he received some injury during birth, or is it possible that the amount of sedation administered to the mother had affected the child? There might be other causes for his failing to breathe spontaneously, but answers to such questions as these often point directly toward more intelligent care.

Since the care of the child during the months before he is born and during birth itself is a part of maternal care and has been covered in the previous discussion, I shall go no further than to say that there is no one who is more interested in or who will be more elated over the wider extension of good conservative prenatal and

delivery care than the pediatrician, for the great majority of the serious difficulties he meets in his care of the newborn baby are concerned with those handicapped in some way before or during birth. Likewise, there is no one more profoundly aware than he is of the importance of a child's being born in a healthy condition for the sake of its immediate and future welfare.

However, regardless of the condition of the child at birth there are certain essential factors that must be considered in the care of all of them. While it is extremely important to examine the child carefully as soon as possible after birth, to ascertain his condition and what his individual needs are, even before that examination and immediately after birth every effort should be made to maintain his normal temperature. It must be remembered that he has been living in an environment with a temperature approximately 98.6° F. before he is born, so after birth he must be adjusted to the outside environment gradually just as we are careful about exposure after getting out of a hot bath. And a temperature of 98.6° F. is hot. Whether he is born in a hospital or in the home such provision for his reception can and must be made before he is born. Failing to maintain the body temperature of the small, highly unstable, prematurely born infant is often responsible directly or indirectly for his failing to survive.

In our hospital we have a small box-like bed with electric bulbs (for heating) inside and a glass-containing hinged lid with a visible attached thermometer inside, so that the baby and the temperature of his environment can be observed, and even most routine care can be administered without necessarily exposing him to the outside temperature. This box has handles and can easily be carried from one room to another or from one home to another, and if electricity is available it can be readily warmed to the proper temperatures and be available for his reception when he is born. Where electricity is not available the same box bed can be warmed with hot-water bottles, hot bricks, or hot flatirons. Where no such apparatus is available blankets or quilts should be heated similarly in preparation for the reception of the child.

Since this box bed is so easily transported and since the average child needs it only for a few hours after birth, during the time he is being adjusted to room temperature, it could be used over and over again at very little expense. It could be made easily and cheaply by almost any carpenter. We have found this apparatus extremely valuable in the care of the premature infant, for often it is necessary over a period of weeks, especially during the wintertime, to help him maintain his body temperature. With such provision one avoids bundling him up with a large amount of clothes or heavy covers which hamper his activity and care. Of course a variety of methods may be employed to help maintain his normal body temperature. The above method has been mentioned in some detail merely to emphasize the point that this basic need of the newborn baby should not be overlooked. Especially in the case of the small prematurely born infant, neglect of this precaution often results quickly in disaster.

Having discussed the maintenance of normal body temperature, we may now proceed to the important matter of protecting the baby from infection. The first step of course concerns protecting his

eyes from possible contaminating infection during birth. There should be no exception in the use of silver nitrate or similar preparations for this purpose. Every precaution should be taken to prevent infection of the cord from the time of cutting until healing has occurred. Infection of the skin should be carefully guarded against by having clothing, bathing materials, and other materials coming in contact with his sensitive, easily infected skin kept as clean as possible. This means that those who care for the newborn baby should have clean hands. Infection of the respiratory tract at this young age is very dangerous and anyone having a cold, sore throat, or other respiratory infection should not come in contact with the baby. Kissing should be avoided, and older children should be kept away from him since any indiscretion on their part might result in dangerous infection. All nipples and bottles containing water or artificial food for his consumption should be carefully sterilized. In fact, anything introduced into his mouth should be sterile. Prematurely born babies are particularly susceptible to these various infections and often cannot survive what commonly would be thought of as a very simple infection.

The third important point concerning the care of the newborn baby has to do with his nutrition and fluid requirements. During the first 2 or 3 days, or until he begins to get an adequate amount of milk, it is just as necessary to see that he gets sufficient fluids as it is that a sufficient amount of water be maintained in the radiator of an automobile. As to his actual feeding, every effort should be made to have the mother nurse him. We begin regular nursing at some time within the first 12 hours after the child is born even though he gets very little food from the mother during the first 2 to 4 days. Regularity in his feeding and other routine functions starts him on the road to good-habit formation.

If for any reason the mother's milk supply is inadequate, then it is quite important that the child get enough to eat of a clean, wholesome, artificial food which approaches in composition mother's milk as nearly as possible. Whether the child is breast fed or artificially fed, it is our policy to begin during the first week or two the addition to his diet of the essential food factors or vitamins. These include orange juice and cod-liver oil or satisfactory substitutes for them. The addition of iron and vitamin B is often indicated for the premature infant especially.

Remember that the baby now must begin to depend on his own nutrition to continue proper growth and development. This will be almost his whole function for a while. It is therefore essential that sane and careful attention be given to this important need. Neglect or carelessness during this very sensitive period might cause irreparable damage and often, in the case of the prematurely born baby, results in his failure to survive.

Of course there are other salient points that must be taken into consideration in the care of the newborn infant, such as quiet, fresh air, healthy surroundings, and so forth, but time does not permit the detailed discussion of these and of others not mentioned. One cannot pass on, however, without mentioning and emphasizing the importance of beginning at birth the supervision and promotion of healthy behavior—mental health.

Having discussed some of the aspects of what might be considered good care for newborn babies, I would like to emphasize one important fact in this connection. That is, that, although we still have much to learn, most of our broad major troubles today arise from lack of widespread application of available knowledge rather than from lack of knowledge itself.

In order to secure wide and effective application of available knowledge, there are two essentials. In the first place, it will be necessary to secure a better and wider distribution of adequately trained nurses and doctors to give this care. Because a nurse is a graduate nurse or a doctor has graduated from a class A medical school, even though they are working in a hospital, does not necessarily mean that they are giving the newborn baby good care or that they are equipped to do so. In other words, it is important that there be good nursing and medical care available for all babies at the time of and following birth.

In the second place, it is not enough to know what good care is or to be equipped to administer it. It is necessary that at least minimal material facilities be available in the environmental set-up to make good care possible. For example, it is of no value to prescribe a certain food or a certain type of care for the baby if the family cannot get it.

Finally, nothing has been said concerning education of parents who must play an important role in this picture. Although all methods should be made use of in that connection, my opinion is that seeing what is actually done to and for the baby is the most effective form of education for parents. In fact, all of us are impressed most by the demonstration method. And, since the sort of care outlined above has demonstrated that it will produce beneficial results, the pleasure and comfort derived from it will stimulate further demand. However, it should be remembered that we tend to place value only on those things for which we pay either in money or effort and we keep our self-respect only if we put forth effort to help maintain our security.

The CHAIRMAN. The Children's Bureau, through its long study of causes of maternal and infant mortality and through its administration of the part of the Social Security Act that provides grants to the States for maternal and child-health services, has received a great deal of information on the status of maternal and infant care in the United States. Dr. Eliot, Assistant Chief of the Children's Bureau, who is in general charge of the Maternal and Child Health Division of the Bureau, will present this information to you. If I could take the time, I would have many things to say about Dr. Eliot. She had a distinguished record in the field of research in the scientific aspects of child growth and child development before she assumed her position as Assistant Chief, which entailed the administrative responsibility for organizing the staff and developing the procedures for a new program of Federal cooperation with the States, and the Children's Bureau's accomplishments in the development of this new program have been due in major part to Dr. Eliot. I take pleasure now in presenting Dr. Martha M. Eliot.

What Is the Need Today?

By MARTHA M. ELIOT, M. D., *Assistant Chief, Children's Bureau, United States Department of Labor*

About 10 months ago one of our neighboring State health officers came to the Children's Bureau with a story of a back-country woman, up in one of the mountainous counties, who had all but lost her life in childbirth because of the inaccessibility of her home to the main highway. She lived only 6 miles off the highway, but those 6 miles were deep sloughs of spring mud, impassable for anything except the toughest of cars, and the husband found that the doctors would not be able to get to his wife. After many hours of anxious attempts he called the country health department for help and fortunately for the family, found a public-health nurse who was game to walk the 6 miles.

The nurse found that the woman had already been in labor for nearly 24 hours and her efforts to locate a doctor who would come to the home were also futile. Clearly, from the woman's condition, medical help was needed and hospitalization was the only hope. With the father's help, and ingenuity on the part of the nurse, they were finally able to get the patient out to the highway in the husband's old model T Ford, which had no number plates but still would run when coaxed. At the highway they were met by the county health officer, and the story ended happily in a hospital 30 miles away.

Having told this story, our State health officer went on to others, not all with the happy ending of the first, but each one showing the urgent needs of these rural women and the despair of the nurse or the health officer or the neighbors or the family because no means were at hand to provide care at delivery.

For many months prior to this visit the need to find some way to care for the large number of women now unable to obtain good care or even any professional care in childbirth had been borne in upon the Children's Bureau with renewed urgency through the reports of State and local health workers on their increased activities in the maternal and child-health field financed through grants under the Social Security Act. Physicians and public-health nurses organizing the work for the State or working in the counties told graphic stories illustrating the futility of their efforts to provide medical and nursing supervision to women in pregnancy when no provision had been made for safe delivery by a competent physician or for hospitalization in emergency or for care of the newborn baby, especially the baby born prematurely. From nurses in the backwoods of Maine to those in the drought areas of Montana or the Dakotas, the high plateaus of New Mexico, the orchards and vineyards of California, and the mountains of Virginia came the same stories of mothers without care in childbirth, of newborn babies dying without medical attention.

Interviews and discussions with rural nurses bring out again and again the hopelessness of telling a pregnant woman that she has high blood pressure and other signs of toxemia and should go to a hospital when she cannot pay for it and there is no other provision for payment, or when it is more than 50 or even 100 miles away. Or of telling her that she must go to her doctor for examination and care when he has already told her that she need not see him until she is in labor.

There is nothing new about these stories. The nurses and doctors working under the Sheppard-Towner Maternity and Infancy Act in the 1920's told them also and laid the foundation for many things that are being done today. What are new today, are the newly appointed physicians and nurses and nutritionists and other workers, and the fresh impetus that has been given to the effort to teach mothers about the care of themselves and their children.

Under the Social Security Act grants have been made to the States to strengthen the maternal and child-health work in the State health departments and to extend the work into the local communities, especially rural areas or other areas of special need. Considering the size of the job to be done, the grants to individual States are relatively small. They do not go very far toward providing even one public-health nurse for each county, to say nothing of approaching the standard of 1 nurse for each 2,000 in the population set up by public-health nursing authorities as desirable. Cities now have 1 public-health nurse for every 5,000 population while the rural areas have 1 for every 11,000. Throughout the United States there are still about a thousand counties without a single public-health nurse to serve the rural population.

Funds under the maternal and child-health provisions of the Social Security Act help to provide about 2,600 of the 6,000 nurses now working in rural areas. But three or four times as many nurses as are now employed would be needed in the country districts and probably twice as many in the cities if reasonably adequate maternal and child-health services, including nursing care at time of delivery, were to be made everywhere available.

More deficient even than the nursing services are the medical services, such as are needed to provide prenatal care through conferences or clinics for women otherwise unable to obtain such care, or infant-care and child-health supervision through centers to which mothers take their children for advice. Last year, under the Social Security Act, prenatal clinics or conferences were conducted by physicians in 2,900 centers in 35 States, but they served less than 500 local political subdivisions out of the total 3,072. Conferences for infants and preschool children were conducted in 6,200 centers in 42 States, but only 685 local political subdivisions were served. Altogether, 2,550 local practicing physicians were paid for their service in prenatal clinics in 22 States and in conferences for infants and preschool children in 27 States. Local health officers rendered similar service in conferences for infants and preschool children in 32 States. There is obvious need for many more such centers.

The medical and nursing care provided at time of delivery is far from satisfactory for many women. Nearly a quarter of a million

women in 1936 were delivered by midwives. More than 15,000 did not have the assistance of either a physician or a midwife.

In connection with this subject of the adequacy of delivery care, something must be said about the major problem involved in the large number of midwives, ignorant and untrained, who are delivering approximately a quarter of a million women each year. There is no use of our burying our heads in the sand and ignoring this problem. It is one that must be faced by professional and citizens' groups alike. Either we must make it possible for this quarter of a million women to have the aid of physicians at childbirth or, if the families live in regions too remote from a center of population to have the service of a physician available, we must seriously consider how a skilled attendant can be provided. Whether the training of nurse-midwives is the answer for all such situations is not clear. The problem is a serious one and should be given serious consideration.

Nursing care at time of delivery in the home has been almost entirely lacking for women in the smaller cities and towns and in rural areas who cannot afford to employ a private nurse. Certain exceptions, however, may be noted, in particular the service developed under the Federal Emergency Relief Administration and continuing to a smaller extent under the Works Progress Administration.

Since the establishment of the social-security program, about 30 State health departments, in cooperation with local health and welfare agencies, have developed special demonstrations or projects through which qualified nurses, usually public-health nurses, are giving nursing care at time of delivery to women in certain small areas, usually a county or part of a county. In all these projects this nursing care is given to assist physicians. Kits of sterile equipment for the use of both doctor and nurse are provided in these demonstrations. The nurse can be of great help to the doctor if she is properly trained, and she will do many things to help make home care safe for the mother and the baby. Tomorrow you will hear more of this from two nurses actually on the job. Various methods are being worked out in these demonstrations, but the important thing to realize is that such delivery nursing service can be given and, if sufficient nurses are added to the staff, it can be given without interference with other maternal and child-health activities or health-department services. Obviously, to do this work more nurses are needed and, if the job is to be well done, they must be nurses trained in maternity nursing care. Last year, under the Social Security Act, nurses gave some care at time of delivery in 166 local political subdivisions. If resources were available, both funds and personnel, there would appear to be no reason why this service should not be rendered in nearly all localities of all States.

Nursing care at delivery in the home is found more frequently in the larger cities than in the rural areas, as a rule in connection with the hospital clinics.

In 1936, of the more than 2,000,000 live births, nearly 900,000, or two-fifths, took place in hospitals. Nearly three-quarters of the births in cities were in hospitals, as compared with one-seventh in rural areas. In many hospitals standards of care for mother and newborn infant are far from satisfactory. There is great need for a systematic scheme of inspection and approval of the smaller hos-

pitals admitting maternity patients similar to the plan made for the larger ones by the American College of Surgeons.

Inaccessibility or lack of hospitals and inability of families to pay for care often interfere with desirable hospital care for women at delivery. Thirty million people live in areas containing less than a minimum provision of hospital beds. Ten million live more than 30 miles from an approved hospital often where road conditions, as in the case cited, would make emergency transportation of women in labor well-nigh impossible; and yet between 150,000 and 200,000 births take place in these families each year.

Few well-organized State-wide systems of ambulance transportation in this country extend out into the rural areas and make it possible to bring in to hospitals the acutely ill patient who cannot afford to hire such transportation.

Recently questionnaires were sent to the superintendents of 2,816 hospitals in small towns and cities of less than 50,000 population asking them whether there were adequate hospital beds for maternity care and whether all women who needed or desired hospital care received it. Answers from 1,160 hospitals were tabulated. More than two-fifths of the 879 superintendents who answered this question said that there were women in their communities, sometimes many women, who did not come to the hospital for delivery because they were unable to pay.

Not only are there these problems of inaccessibility of hospitals, and inability to pay for hospital care; there are also many areas in which expert care by physicians is not available.

Dr. Litzenberg and Dr. Casparis have described the conditions that are favorable to life and health for mother and child and have indicated the responsibilities of physician and nurse. To what extent can we say that such care is available for mothers and babies in this country? Obviously, the type and quality of care are as varied as the conditions under which families live. In some communities, usually the larger cities, care can be obtained for mother and child that cannot be surpassed in any land, and the results of such care are correspondingly good. In other communities where proper facilities are almost entirely lacking, the care for mother and child is certainly of the worst. As an illustration, may I point to one State where in five counties over a 4-year period less than 26 percent of the births were attended by physicians, and in eight counties from 20 to 30 percent of the births were attended only by family or neighbors. Moreover, in this same State in the same 4-year period 47 percent of all the infants who died had had no medical attention.

A questionnaire on facilities for maternal care was sent to State health officers in the spring of 1937 at the request of the conference of State and Territorial health officers. Of 49 health officers who replied, only 2 considered the facilities for maternal care in their States satisfactory: 41 declared the facilities to be definitely inadequate; 6 others modified their statements by such remarks as "Care is inadequate for those who cannot pay," or "Facilities fair, resources inadequate," or "Adequate for medical care but not for delivery and nursing services." Questions with regard to the number of general practitioners of medicine who include obstetrics in their practice, brought out the response that in 17 States there are not enough general practitioners doing obstetrics and frequently they are poorly dis-

tributed in the rural areas. They tend to concentrate in the larger towns and cities where a living is made more easily.

In some counties, moreover, there are no physicians; in others, only one or two. To be sure, these counties are usually the large, sparsely populated ones of the West where, on the whole, health conditions are fairly good; but I think it should be remembered that babies continue to be born in these areas and mothers need help even though they happen to live 30 or even 100 or more miles from the nearest doctor. The stories of the struggles of nurses to get help in time of trouble cannot be ignored. Some way surely can be found to meet this need.

Replies from State health officers to a question regarding numbers and distribution of specialists in obstetrics brought out again the well-known fact that there are many areas in which such skilled physicians are not available either for regular care of patients or as consultants to assist and advise general practitioners. Forty health officers reported that there are too few specialists in obstetrics practicing in their States. In one large State obstetricians are found only in three cities, and many women who might need their care live 200 to 300 miles away across the mountains. Other States are equally poorly served. Some States are now beginning to plan for a consultant service in obstetrics and pediatrics to reach the people who cannot afford this type of care. At least two densely populated Eastern States have such a plan in operation.

I have said nothing of those most important indexes of care, namely, the death rates of mothers and their newborn infants. It is well known, of course, that the maternal mortality rate is high in this country. In 1935, 12,544 women died as a result of conditions directly attributable to pregnancy and childbirth. In addition, 1,752 other women who were pregnant or recently delivered, died of conditions such as tuberculosis, chronic nephritis, or heart disease that may have been adversely affected by the pregnancy—making a total of more than 14,000 deaths of women associated with pregnancy or childbirth. Figures just released from the Bureau of the Census show that in 1936, 12,182 mothers died, giving for that year a rate of 57 for each 10,000 live births, or 1 point lower than in 1935. There are, of course, great differences in the rates of different States, ranging all the way from 91 in Arizona and 90 in South Carolina down to 40 in Rhode Island and in New Jersey. If we look at individual counties we find an even wider range, from no deaths at all for a 5-year period up to a rate of more than 200.

During the 22 years for which statistics are available there has been essentially no decline in maternal deaths until recent years. Now the trend is downward, and the chief improvement is found in reduction of deaths from toxemias of pregnancy, the condition which par excellence is the one affected by proper prenatal care. The deaths from causes associated with the delivery itself have shown scarcely any improvement throughout these years. Deaths from hemorrhage have decreased slightly, but not so deaths from infection or sepsis, which are largely preventable if good care is given before and at the time of delivery. Physicians who have studied and analyzed the records of many thousands of these maternal deaths have concluded that one-half to two-thirds can be prevented.

What about the deaths of newborn babies? For years we have said that great progress is being made in reducing the death rate of infants during the first year of life, but we always have to modify our statement by saying that there has been little progress in reducing the death rate of infants during the first month. And yet the deaths in the first month represent half of all deaths in the first year. Actually, in 1935 nearly 70,000 infants died before the end of the first month of life, more than 56,000 of them from conditions directly connected with prenatal life or the birth itself. More than half of these early deaths are associated with premature birth. During 21 years the death rate of newborn infants on the first day of life has not decreased at all.

Closely related to these deaths on the first day of life are the stillbirths. Seventy-seven thousand of these were reported in 1935, but this does not represent all because the reporting is known to be very incomplete and some States do not report stillbirths at all. The special tragedy of these stillbirths is that nearly half occur in the mother's first pregnancy and, in a very considerable proportion, the mothers had had previous stillbirths and no living children. This has been shown in a recent Children's Bureau study. Moreover, the study showed that in more than half the cases in which the mother was at term the baby was alive at the beginning of labor.

Can these babies be saved? In all probability at least half the babies who die in the first month of life can be saved if adequate care is given to both mother and baby. This has been demonstrated in many areas, rural as well as urban. The same measures that will reduce maternal deaths will reduce these infant deaths. They will reduce stillbirths also, and if skillful care is given to the infant immediately after birth and during the first 2 weeks, gains will be made.

Dr. Litzenberg and Dr. Casparis have given us a picture this morning of what this good care should be. But we are still faced with the question of how the community can provide the facilities that are needed to implement such a program of good care. It cannot be done overnight, obviously, but what is needed, and what so many communities do not now have, is good community organization for general public health and for maternal and child-health service.

Good community organization that will insure adequate provision for mothers and newborn infants implies (1) the existence of a good health department under the direction of a full-time health officer, with additional personnel commensurate with the needs of the community, including those equipped to serve in the field of maternal and child health; (2) the cooperation and assistance of local physicians qualified to give the necessary care for mothers and their newborn infants and for all other members of the family; (3) the services of specialized consultants in obstetrics, pediatrics, and other branches of medicine; (4) public-health nurses sufficient in number to carry a full maternal and child-health program, including care at delivery; (5) adequate hospital facilities; and lastly (6) community resources to provide care for those in need.

For this local health department there should be suitable quarters for office and conference rooms, a laboratory and consultation rooms for the use of staff and local physicians, and, under some circumstances, X-ray equipment and even a few beds to be used for ob-

servation or temporary care of patients on the way to hospitals in larger centers of population.

If good maternal and infant care is ultimately to be made available for all that are in need of care, some such basic health organization is essential, one in which all the citizens will feel that they have an interest, one in which all physicians of the community will participate.

The task of finding the way to provide good care for mothers who are in need is no small one. There are, indeed, no accurate figures of the number who cannot secure this care unaided. But the cost of such care is clearly prohibitive for many thousands of families, and the provision of good maternal and infant care must be based not only on the ability of the family to pay but on the medical need of mother and child.

It is estimated on the basis of 1935 income figures that there are approximately 840,000 births each year in families on relief or with total annual incomes, including home produce on farms, of less than $750. Six hundred and fifty thousand of these, or nearly one-third of all the births in the United States, occur in rural areas or in cities of less than 50,000 population; nearly 200,000 occur in larger cities. Raise the income level to $1,000 a year and there will be included approximately 1,000,000 births. The magnitude of the problem of providing medical care for even a few of these families is obvious. Many of them are being cared for today by their local family physician without pay; in some cases welfare departments now pay for delivery care; many of these women, especially those in cities, will be cared for in hospitals. There is still, however, a large group who get only partial care from a physician or nurse, or even none at all. Upon the births in many of these families, however, depends the replacement or the growth of our population. It would seem then to be to the interest of society and the Nation that the unnecessary loss of life of mother and her newborn infant be reduced to the lowest level possible and that the health of all mothers and children be raised to the highest level. To do this, a way must be found to provide the needed care.

The CHAIRMAN. We shall consider this afternoon what is involved in all these broad aspects of economic and social conditions and health organizations in extending this type of care that Drs. Litzenberg, Casparis, and Eliot have placed before us. I am going to adjourn the meeting at 12:30, but I want to ask before that whether there is anyone in the audience who has anything in writing that he wishes to present to the conference to be passed on for the consideration of the committee on findings.

Dr. Matsner, we will give you 2 minutes.

Dr. MATSNER. I represent the National Medical Council on Birth Control. I have a communication here addressed to this conference, which has been signed by over 300 physicians. It is a brief statement that I can read in a minute and a half, and in the other half minute I should like to tell you something of the signers of this statement. The statement is signed by 90 percent of the members of the council, by the president of the American Medical Association, by the president of the United States Pharmacopoeial Convention, by 13 deans of class A medical schools, by 45 professors of obstetrics and gynecol-

ogy, by 55 associate and assistant professors of gynecology, by 68 professors and associates in class A medical schools representing departments of pediatrics, psychiatry, neurology, surgery, and medicine. [Reading:]

To the Conference on Better Care for Mothers and Babies, Washington, D. C.:

The undersigned members of the National Medical Council on Birth Control, and other physicians particularly interested in problems of maternal and infant welfare, endorse the constructive accomplishments of the Children's Bureau in these fields.

We hope that from this important conference will come concrete recommendations which will extend measures of positive health in the program of maternal and child welfare throughout the United States.

We are therefore sending this communication and recommendations with the request that they be given consideration by the conference.

An analysis of studies on causal factors of maternal and infant mortality makes it apparent to us that an important factor frequently overlooked and not specifically mentioned in any of these reports is the pregnancies in a large group of "poor maternity risks," as well as the disastrous effects of too frequent childbearing, with its attendant increase in morbidity and mortality among both mothers and infants.

Further, we draw attention to the fact that approximately one-fourth of the high maternal death rate in the United States is due to abortion. It is our feeling that the reduction of induced abortion is partly dependent upon the effectiveness of medical contraception.

We agree with the Chief of the Children's Bureau in her statement that "measures * * * successfully undertaken in certain communities in the behalf of selected groups * * * be extended to benefit mothers and babies throughout the United States." One of these measures is the availability of adequate contraceptive information for the purpose of child spacing and the avoidance of conception of women suffering from physical and mental conditions in which pregnancy is inadvisable.

This measure, which has been apparent to many obstetricians and public-health authorities, has up to the present time been considered too controversial an aspect for specific recommendation. At present, however, the official action of the American Medical Association, of numerous State and county medical societies, the decisions of various United States courts, as well as resolutions passed by a large number of important lay and professional organizations, all indicate that our recommendations are supported by both medical and public opinion.

RECOMMENDATIONS

1. That all obstetrical services and postnatal clinics be equipped to give contraceptive instruction to mothers for the purpose of child spacing.
2. That all maternity clinics be equipped to give this instruction in accord with State regulations to patients whose conditions from the medical view make pregnancy inadvisable, either temporarily or permanently.
3. That instruction of practicing physicians be encouraged in the medical conditions calling for contraception and in the techniques of modern contraception.

The CHAIRMAN. The report will be referred to the committee on findings.

(Meeting adjourned.)

Monday, January 17—Afternoon Session

Mrs. J. K. Pettengill, Chairman, Conference Planning Committee, presiding

The CHAIRMAN. The subject of the afternoon is "What is involved in extending good care to all mothers and babies?" Our first speaker on economic resources and ability to secure good care is Dr. Mordecai Ezekiel, economic adviser to the Secretary of Agriculture and a member of the President's Advisory Committee on Education.

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WHAT IS INVOLVED IN EXTENDING GOOD CARE TO ALL MOTHERS AND BABIES?

Economic Resources and Ability To Secure Good Care

By MORDECAI EZEKIEL, Ph. D., *Economic Adviser to the Secretary of Agriculture*

You may wonder, perhaps, why an agriculturist should be here talking on the subject of mothers and babies. I am not going to present data on how much Federal and State governments spend per pig or per calf born, contrasted with how much they spend per child born, in research or service in the respective fields. Those are statistics with which no doubt you are all familiar and which I commend to your interest. Instead I am going to talk on the general topic of the controlling factors in our economic ability—the economic ability to provide health care as well as economic ability in other fields.

Of course, it is a truism that there are tremendous variations in individual income in this country. Although few families have much more income than they can at least spend on themselves, a very much larger proportion of the families have incomes far below those which they need to provide any of the elements of a decent living, including adequate medical service.

Even in our most prosperous year—1929—more than one-fifth of all of our families had incomes of less than $1,000. Now out of a $1,000 income, according to some studies recently made, a family usually manages to squeeze enough to spend only $30 to $40 a year on medical service for the entire family. It is obvious that $30 or $40 a year will not go far toward purchasing adequate medical care, buying drugs, and buying all other health supplies.

If you go up into the next higher income brackets, from $1,000 to $2,500, you find that in 1929 almost one-half of all our families fell in these brackets. Those are the families that are less likely to avail themselves of free clinic service and other free services, that are more likely to be so proud of their position in the community as middle-class people that they insist on getting only the care they can afford to pay for. Out of incomes falling in the $1,000 to $2,500 group, there is not enough to pay for adequate medical care.

These figures I am citing are as of 1929, when the national income was possibly 50 percent greater than it is today. We have no adequate data on the present situation, but there can be no question that a very much larger proportion of our total population is unable to provide proper medical care for itself today than in 1929. Certainly a much larger proportion falls lower on the income scale than it did then.

The next question is: If individuals do not have the income to take care of themselves, cannot local government—county, city, or State—provide the funds to give local service to these people? The difficulty is that it is precisely in the parts of the country where income is lowest that the need is greatest and, as a result, there are

no local resources in the county or city or State to fill up the gap where it most needs filling up.

The real difficulty goes back to our economic system as a whole. The economic system we have unfortunately—or possibly unfortunately from this point of view—refuses to be restrained by State rights. It does not keep within the boundaries of a State the income produced in that State, and as a result the income produced by the economic activities of the entire Nation tends to be drained off to income recipients mainly in the industrial centers of the Northeast. As one person has described it, some inhabitants of Manhattan Island receive a tax tribute on every economic activity that occurs anywhere within the boundaries of the United States. From the figures as to the total income received by individuals in each State, on which the State might levy taxes to support health and other services, we can see how great the disparities are.

In 1935, for example, the average per capita income in our six richest States was nearly four times as large as in our five poorest States. That is in terms of the people there. In addition it happens that the number of births is largest where the incomes are the lowest. In New York State the income per child born is six to seven times as large as the income per child born in Alabama or Mississippi. It is obvious from those facts why New York State has within its boundaries the economic resources to do a better job of providing for its people than some of the other States.

In addition to the differences between States, however, we also have differences between areas within a State. In practically every State we find that the per capita income is higher in the cities and lower on the farms and, in turn, that the number of births in relation to population is lower in the cities and higher on the farms.

For the entire United States the number of infants under 1 year of age in cities averaged about 26 for each 1,000 adults of working age (20 to 64 years). The number of infants on farms averaged 45—nearly twice as many children to be supported per thousand of farm people as per thousand of city people. The relation of the adult population to births is about the same. In the Carolinas, for example, predominantly rural States, there are about 50 births per 1,000 adults of working age. In New York State there are 24 births per 1,000 adults of working age.

A brief summary of the disparity between the distribution of income in our industrial cities and on farms, as contrasted with the distribution of the load of births and children, can be presented most briefly in a statement from the report of the President's Advisory Committee on Education. In the cities of the Northeast in 1929 there were 8,500,000 children of school age. The income available to the parents of those children in the cities of the Northeast that same year represents 42 percent of our total national income. On the farms of the Southeast there were 4,500,000 children of school age, a little more than half as many as in the Northeast. The income available to their parents on the farms in the Southeast was 2 percent of the national income. The cities had 42 percent of the national income to take care of 8,500,000 children; the farms had 2 percent of the national income to take care of 4,500,000 children.

If you want to know why death rates are higher on farms, and why the standard of care and provision for the farm population in

health and in almost every other aspect of life is lower, you need only to consult those figures.

There is one other aspect of the problem that I call to your attention: that is the importance to the cities of what happens on the farms. These areas of lowest income and highest birth rate, the areas that are least able to take care of their children in health or education or other ways, produce the population that the rest of the country needs to maintain its growth. That can be stated in many different ways. One statement is that 40 percent of all the boys and girls, 10 to 20 years old, living on farms in 1920 had left the farms to go to the cities by 1930. That is average for the United States, but we can consider each State separately and still find that throughout the Nation there is a steady drain of population from the farms to the cities. For example, in States as widely separated as New York, Arkansas, and Texas, one-third of the boys, 10 to 20 years old, living on farms in 1920 had left the farms by 1930. In States like Georgia that have still denser population more than one-half of the farm boys moved to cities during this decade. It is really this flow of population from farms that continues and makes possible the growth of our cities. A great many cities today do not produce enough children to maintain even their present population. In many cities one-half to two-thirds of the present population came in from elsewhere, mainly from farms.

One word of caution in this connection: If we succeed in greatly reducing infant mortality on farms, we shall have a still greater excess of births over deaths, or of surviving children, in farming areas than in the cities. We have today a serious economic problem of surplus population on farms; of city industry failing to provide jobs for the normal flow of farm youth, with a resultant damming up on farms of youngsters who are ready to go to the cities. Everything that is done to improve the health of the youngsters on farms and to reduce their death rate will increase the number of those available to go to the cities and will make it all the more necessary to increase the activity of city industry to the point where it can absorb the population on farms waiting for jobs. As we do everything we can to increase the health of those on farms and reduce their death rate, we intensify other problems that will need still more attention in their turn.

Looking at the question as a whole, then, we can say that the facts of economics and population indicate that the farm population's problem of the standard of living, of ability to care for themselves, of ability to care for their mothers and babies is a matter of concern not merely to farmers but to the entire country. The children growing up on farms represent the stock for the cities' future growth. They represent the human material that is going to make the cities of the future. You are justified in asking the cities of the Northeast to pay some attention to conditions of care for mothers and children on the farms south and west of them because it is the future citizens of those cities about whom you are concerned.

The CHAIRMAN. On the same subject as the paper that has just been presented but treated from the point of view of recent studies, our next paper will be given by Dr. A. F. Hinrichs, Bureau of Labor Statistics, United States Department of Labor.

Economic Resources and Ability To Secure Good Care

By A. F. HINRICHS, Ph. D., *Chief Economist, Bureau of Labor Statistics, United States Department of Labor*

The problem that you are discussing, I understand, largely from the point of view of the needs of rural areas is of vital interest to those of us who are also concerned with the situation of the urban wage earner. Dr. Ezekiel has pointed out that the income per child born in New York State is six or seven times that in other States, but it is not to be concluded that the provisions for medical care in the large urban centers are in any way adequate to meet the needs of the lower-income groups living there.

From studies that the Bureau of Labor Statistics has recently completed, the Children's Bureau estimates that approximately one-third of the families of two or more persons in cities of 50,000 or more population have incomes of less than $1,000 a year and that nearly half of the families in these cities have incomes of less than $1,250. Even among a relatively favored group, the native white families of Chicago, almost one-quarter had incomes of less than $1,000 a year and somewhat more than one-third had incomes of less than $1,250. Among approximately 900 wage-earner families in New York City during the year studied, one-third of the children were born to families with incomes of less than $1,200 a year, and less than one-tenth of the children were born to families with incomes of more than $2,100. The Children's Bureau figures indicate that we may assume that one-third of all the children are born to families with incomes of less than $1,000 a year, and almost half are born to those with incomes of less than $1,250, even in the urban centers.

What does such an income allow for medical care? This depends, of course, upon how many persons there are in the family. A family of two persons with an income of $1,000 may have more left after paying for essential clothing, food, and shelter than one of, say, four persons. But if we are talking of a family living in New York City and having several young children, an income of less than $1,200 a year represents a total expenditure of less than $300 per expenditure unit. "Expenditure unit" means an adjusted average per capita. At this level the wage-earner families not on relief in New York City spent approximately $26 for medical care for the entire family, as against nearly $100 when the income level reached what is roughly $800 per capita. Families at the low economic level spent 2.2 percent of their income for medical care; wage earners at the higher economic levels spent about 4.5 percent.

What do families at the lower economic level—that is, one-third to one-half of the families—buy in the way of medical service? In the first place nearly every such family has some form of medical expenditure, most often for medicines. Of the approximately $26

such families spend for medical care, $8.25 goes for doctors, $7.50 for medicine, $5.50 for dentists, $2.75 for hospital charges, and $1 for eyeglasses.

It is interesting to see how these proportions change as the family gets an income sufficient to allow greater freedom in spending for medical care. Total expenditures of families of more or less fully employed wage earners—not on relief—studied at the highest income level are quadruple the total expenditures of families at the lowest income level; expenditures for medicines and drugs do not quite double; expenditures for dentists quadruple; expenditures for doctors increase four and a half times; and hospital expenditures increase five times.

Still more significant, perhaps, is the fact that on the average 20 percent of the medical expense of families at the highest income level is for specialists. At the lowest income level only about 7 percent of the medical outlay is for specialists. The primary reason for this lower percentage is that specialists are not privately consulted by families at low income levels. Only 3 of the 59 families studied in this group reported any outlay for a specialist. These 3 spent more for the specialist than the group as a whole spent for all medical care. In other words, if families with incomes of less than $1,000 or $1,200 a year are to receive specialized care, apparently it must be through clinical or public services.

These figures on income and expenditure indicate that families of low income have almost no margin that can be considered in conducting a campaign for maternal and child health. I am not qualified to say whether or not it is advisable to conduct an educational campaign to increase such families' desire and willingness to use available public facilities, but an educational campaign that implies their making larger private outlays would be doomed to failure. At the lower economic levels that we are discussing, less than half the families were spending enough for food to produce an adequate diet at minimum cost. There could hardly be a more striking index of the immediate and pressing inadequacy of daily living at the income levels under consideration. An adequate health program at these levels must either become part of a movement for more adequate incomes—and by that I mean at least a doubling of these low incomes—or it must seek to provide essentially free facilities that may be used by those who understand their value.

The CHAIRMAN. Our next topic is "Professional Resources and Ability To Provide Good Care," and our first paper is by Dr. M. Edward Davis, of the University of Chicago School of Medicine, who during the past few years has had extensive experience in postgraduate education for local physicians in all parts of the country.

Professional Resources and Ability To Provide Good Care

By M. Edward Davis, M. D., *Associate Professor of Obstetrics and Gynecology, University of Chicago School of Medicine*

The high maternal, fetal, and infant death rates in the United States have been in the limelight for at least the past two decades. When the facts and figures were first brought to our attention we attempted to explain them away as the distorted statistics of overzealous workers. It seemed just "too ridiculous" to believe that in our country proportionately more mothers and babies lost their lives as the result of the physiologic function of reproduction than in most of the civilized countries of the world. As facts were piled upon facts we were slowly brought to the realization that conditions were even worse than they were pictured. Today we no longer dispute their accuracy. What we are concerned about is the improvement of conditions, the reduction of the appalling loss of life.

Professional agencies, having taken cognizance of the situation, began to study, plan, and institute measures aimed to improve conditions. Their combined efforts have resulted in some improvement, but we have barely scratched the surface. In the 5-year period between 1930 and 1935, although there was a 13.4 percent decrease in the maternal death rate, there was no reduction in the rate of death from infection. Furthermore, in 1936 over 12,000 women lost their lives in childbirth. What is more important is the fact that it has been estimated that two-thirds to three-fourths of these deaths are avoidable or preventable. These facts are a challenge to the ingenuity, resourcefulness, and efforts of the professional personnel and institutions that render maternal and infant care.

Obstetrics is unlike most of the other branches of medicine. To reproduce has always been regarded as a normal physiologic function. However, it is not normal for complications to occur that bring illness, serious damage to organs, and even death in their wake. It is true that in a large majority of instances pregnancy and labor will be normal and will end uneventfully for mother and baby. This fact has lulled the lay public and the profession into a false sense of security. It is likewise true that complications can and do arise and disasters strike unheralded, reaping their toll of mothers and babies. It is for these reasons that proper provision must be made for the care of all the mothers and babies.

Adequate care must continue throughout pregnancy, delivery, and the postnatal period.—To safeguard these mothers and babies, adequate care must be provided throughout pregnancy, labor, and the postnatal period. This care should include careful and thorough examination of the mother early in her pregnancy, frequent periodic examinations during that pregnancy, care at the time of delivery,

and a careful follow-up of the mother and baby after delivery. This continuous care is absolutely necessary if we are to better conditions. Isolated phases of maternal and infant care have been tried in certain localities and have proved of little value in reducing maternal and infant mortality. In an urban center in North Carolina a prenatal service was established that provided adequate prenatal care for indigent patients. These women were delivered, however, by physicians in the home and in the hospital without adequate supervision. The result of this experiment over a period of several years proved that prenatal care alone is not sufficient. Prenatal care is essential and productive of much good, but it must be followed up by careful supervision during delivery and the postnatal period if it is to be of real value.

Professional resources necessary for adequate care.—Good maternal and child care entails the following: Trained professional personnel, suitable hospital facilities for complicated and other selected cases, and a good home environment. In the final analysis the maternal and infant care that will be rendered to our people must depend upon the professional personnel. The physician is and always will be responsible for the care rendered to the mother and her baby. His education, experience, and skill must be directly reflected by his ability to provide good care. Unlike a commodity that can always be manufactured with the same perfection by a machine, medical care must always remain an individual service. Like all other individual services, such as that provided by the minister or the lawyer, the character of that service must vary with the individual rendering it.

The family practitioner in charge of an obstetric patient may be in need of consultation when complications arise. His inability to cope with these complications is no reflection on his training, for in all likelihood he has made the most of his opportunities but they have not been sufficient to prepare him to meet these emergencies. He must thus avail himself of the services of a specialist as a consultant. Needless to say, the consultant should be thoroughly trained in obstetrics or pediatrics in all its phases to render adequate service to the patient and her physician.

The services of a nurse specially trained in these fields are essential to good work on the part of the physician. The nurse is responsible for the many special nursing details that enter into the conduct of pregnancy and labor. Upon her ability and training depends, to a large extent, the quality of the medical care rendered to the patient by her physician.

A trained medical social worker will be able to integrate the various services rendered the patient so that they function smoothly and result favorably.

The ability to provide good care depends on the locality and the available facilities. It is easiest to provide good care in a specialized maternity hospital equipped with all the refinements that simplify and safeguard the practice of obstetrics and pediatrics. It is more difficult to provide good care in the improvised maternity service of the small general hospital, where many extraneous influences complicate the problem further. It is most difficult to provide good care to women living in sparsely settled rural areas, far removed from physician and hospital.

Although the majority of women are still delivered in their own homes, desirable hospital facilities are necessary for the treatment of complications that may arise. Certain safeguards must surround a maternity ward or hospital. If it is isolated architecturally, these safeguards are easier to institute and maintain. There are only 125 maternity hospitals in the United States, of which few are large enough to maintain an adequate, thoroughly trained personnel. Most of the general hospitals maintain maternity services, but these provide special problems.

A maternity ward in a general hospital must be sufficiently isolated, architecturally if possible, from the rest of the hospital to avoid the likelihood of a spread of infection from patient to patient. It should have its own operating room, as well as delivery room, in which major complications amenable to surgical intervention can be treated. It should have trained personnel who can carry out the special technique necessary for the best care of obstetric patients. It should provide sufficient nursery facilities, adequately segregated and in charge of specially trained personnel, for the care of the newborn babies. It should provide rigid isolation facilities for the mother or baby who enters the hospital with an infection or develops one in the hospital.

It is obvious that a good home environment is an aid to better maternal and child care in that the majority of mothers are still delivered in their homes. Statistics prove that the poorer the home environment, the more difficult it is to carry out the necessary procedures safely and advantageously for the patient.

Professional resources available today.—Professional resources vary considerably depending on the locality. In rural areas at least one out of five confinements is managed by untrained attendants. These may include midwives with little or no experience. Obviously, it is desirable to have a medical attendant present at every delivery. The sparsely settled parts of our country have too few physicians to make this possible at the present time. The bureau of medical economics of the American Medical Association reported that in 1936 there were 233 counties in which there were more than 2,000 persons per physician. Furthermore, in 19 counties there was no physician. In these rural areas distances are great and accessibility to physicians difficult.

The family physician has not had the opportunity to obtain a thorough training in obstetrics. Medical schools have not provided him with sufficient background in this field so that he can give adequate care. He must, therefore, rely on his own resources and on what little experience he has been able to obtain in private practice. He attends most of his deliveries with fear and trepidation, hoping that nature will be kind and that the process will be normal. When an emergency arises he does what he can with his limited knowledge and often without suitable facilities and help.

Economically the family physician cannot afford to give adequate care to his obstetric patients. He is poorly compensated for obstetric cases in rural areas. The long hours that have to be expended in the proper conduct of these cases are a wear on his physical self and a drain on his professional time. He often resorts to needless surgery to hasten a labor that would have eventuated normally. These surgical procedures by people poorly qualified to do operative

obstetrics increase the number of complications and the ultimate mortality.

The conscientious physician who is in need of consultation in the rural areas usually calls in the general surgeon. In most such localities a trained specialist in obstetrics is not available. The surgeon views every obstetric problem as a surgical procedure. He has had little or no experience in the conduct of labor, so that he can rarely determine the cause of the difficulty and more rarely institute the proper treatment. He knows that Cesarean section is a way out of the emergency. This results in an increased incidence of abdominal delivery with its inevitable high mortality. This problem assumes added importance because deaths after Cesarean section contribute markedly to the maternal mortality. Lynch, in a recent study of a selected area, showed that Cesarean operations were responsible for one-fourth of all the maternal deaths after the seventh month of pregnancy.

Hospital facilities are often inaccessible in rural areas. Many of the complications of pregnancy are most satisfactorily treated in an institution. Modern treatment demands the hospitalization of patients who bleed in the last trimester of pregnancy. The care of such patients in the home must always result in mortality because of a lack of proper facilities. It is true that the improvement of roads has made hospitals more accessible, but there are vast, sparsely settled areas in which it may be necessary to transport a patient 75 or 100 miles in order to reach a hospital. Furthermore, many rural hospitals are not suitable for the care of maternity cases. They do not provide sufficient isolation from other patients in the hospital who have serious infections. They do not provide a sufficiently trained personnel. They do not provide suitable nursery facilities to make them safe for newborn babies. Indeed, authorities in this specialty have maintained that it is safer for the patients to be delivered in the home, even though complications arise, than in many of the available hospitals. The problem in urban centers varies considerably. The general practitioner delivers too few patients to develop obstetric judgment and economically he can ill afford to refer these patients to specialists. When one considers the fact that serious obstetric complications occur rather rarely, one can realize the large number of patients the average attendant would have to see in order to develop sufficient skill to treat these complications. The well-trained specialist rarely practices in small urban centers, for it is usually necessary that he select a town of over 100,000 population in order that he can confine his work to the specialty. The general practitioner in the small urban center, therefore, does not have consultation service to assist him and to help him develop good obstetric judgment. Hospital facilities may likewise be inadequate for the reasons previously enumerated. Even in large hospitals in large cities facilities for the care of the newborn have been found to be grossly inadequate. This has recently been brought to our attention by the outbreak of serious epidemics among the newborn in two large hospitals in a large midwestern metropolitan center.

It is true that in a few of our largest cities obstetric centers are available wherein the best accepted practice in this field is carried out. There are usually maternity wards and hospitals affiliated with

medical colleges. It is here that the professional personnel is being trained. These institutions represent the bulwarks of good obstetrics.

The problem of improving our professional resources.—The problem of improving our professional resources must begin with our medical students. They are the practitioners of the future, and improved medical care in any field must depend on their education, ability, and training. At best, undergraduate medical schools can only lay the ground work for obstetrics and pediatrics.

The education of our medical students has been and still is totally inadequate to prepare them to be safe attendants during childbirth. The council of medical education and hospitals of the American Medical Association at its last meeting in 1937 reported that "the teaching of obstetrics is at a lower level than that of the other major clinical departments. Comparatively few schools offer to their students an adequate practical experience under competent supervision." Inasmuch as the large majority of medical students will practice obstetrics, this represents a serious indictment.

Undergraduate education in obstetrics should include thorough ground work in this field. Ideally the student should be in attendance on at least 50 to 100 confinements in the home and in the hospital in addition to having experience in the prenatal and postnatal clinics. Even though he has had this clinical experience, he may still miss seeing some of the major serious complications, such as placenta previa or eclampsia, for they occur once in 200 or 300 deliveries. Contrast this with what the grade A medical schools are providing for their students. There are some schools that do not require the student to deliver any patients before graduation. In a number of the schools the student is responsible for from 2 to 15 deliveries. In only a small group of the institutions does the student have an opportunity to take part in more than 15 deliveries. This inadequate clinical training provided the student is undoubtedly due to the failure of administrative authorities to provide access to a sufficient amount of clinical material.

It is not only necessary to provide sufficient clinical material for proper student training, but that training must be supervised by competent instructors. On some of the out-patient services used for teaching, students are sent into the homes to deliver patients without supervision. They can usually call on some individual if difficulty arises. These deliveries have little teaching value. Every delivery attended by a student should be in charge of a competent instructor. Needless to say, a nurse should accompany doctor and student so that she too can learn, as well as aid in the technique of the delivery. When competently supervised, the care of obstetric patients in their own homes can be made an integral part of good obstetric education.

At the present time in many schools the student after graduation is required to serve an internship before receiving the M. D. degree. In some of the States this year of clinical work is required by the State board of examiners. This training need not include obstetrics, so that unless the student selects obstetrics he will have no additional training during this period. It may be highly desirable to include several months of obstetrics in a rotating intern service, particularly if the doctor intends to care for obstetric patients and their newborn babies. A survey of the medical graduates of 1936 indicated that

only 22 percent of them were receiving some clinical obstetric training during their internships, but 63 percent wished to receive additional training. Furthermore, 72 percent of the doctors planned to include obstetrics in their medical practice. It is thus self-evident that many of the young medical practitioners entering practice today are not equipped to provide adequate care for mothers and babies.

The general practitioner delivers the vast majority of the babies and will continue to do so. Any extension of the present service to mothers and babies must include the family physician. It is thus essential that his education be continued and extended. The goal should be the development of a safe practitioner and not a specialist. It would be highly advantageous if opportunities were provided for frequent short periods of additional training. The refresher courses that have been in vogue in many of the States during the past few years are highly desirable and should be continued. They must continue, however, to be elementary. They are useful in helping to develop an appreciation of the specialty and in creating a desire on the part of the general practitioner to seek further and more adequate training. Furthermore, they are useful in helping the physician to keep abreast of advancements in medical science. Needless to say, a series of four or five lectures will not qualify the physician as an obstetrician, but they do help in clearing up many ideas and in inculcating a wholesome respect for the physiology of pregnancy and labor.

The facilities for the training of specialists must be expanded. There are very few institutions in America where a young graduate can obtain even a year's training in obstetrics, which is the minimum time necessary to secure a working knowledge for good obstetric practice. Such an institution must be large enough to provide a sufficient number of patients so that the student can have an opportunity to have an intimate contact with at least 500 to 1,000 patients during his training period. Furthermore, all the work must be carefully supervised by competent instructors in order that this experience may be of value. The lack of suitable opportunities for the training of these graduates is evident from the fact that the American Medical Association lists but 82 approved hospitals admitting more than 1,000 patients annually that offer resident positions in obstetrics or obstetrics and gynecology. Only 62 of this number offer both resident and assistant-resident positions. Altogether there are only 287 positions listed that offer 1 year's experience in obstetrics, including all approved hospitals.

It is apparent from the foregoing that if we are to make a beginning in the attempt to provide trained personnel for the care of the large majority of our women and children we must provide opportunities and facilities for the training of this personnel. These can only be made available by the establishment of special teaching centers geographically located in accordance with the greatest need. These centers must provide facilities for the delivery of many patients under ideal circumstances. It is obvious that for training in obstetrics a large number of patients must be available. Every surgical case entering an institution represents a major complication, but among many women delivered only one complicated problem is present. These centers must have well-trained teaching staffs.

Thus, carefully supervised training of doctors, nurses, and social-service workers can be made available.

If such centers can be established, located geographically where they can do most good, they will answer a fivefold purpose. In the first place, they will provide opportunities for extending undergraduate medical education to the student. Universities with the best faculties and the best students cannot teach medicine without patients, and one of the most serious problems confronting medical schools today is the securing of sufficient clinical material for adequate student teaching. In the second place, the centers will provide facilities for the continued education of the general practitioner. Short clinical courses can be made available to him under ideal circumstances. In the third place, these centers will provide an opportunity for the training of the special personnel necessary in carrying out any extension of present medical care. Opportunities can be provided for the training of men and women who will devote their professional endeavors to the care of mothers and babies. Specialists in this field should have at least 3 to 5 years of well-supervised graduate work. In the fourth place, the centers will provide the ideal hospital for the mother and her newborn baby in the event that hospitalization is desirable. She will then be surrounded by all the safeguards that modern medicine can provide. She will be the ultimate beneficiary of all these developments in the interest of better medical care for mothers and babies. Lastly, such centers can help to extend the frontiers of medicine. They will make available facilities for the study and investigation of large numbers of patients presenting important problems. They will provide workers and teachers and investigators who can and will make use of this concentrated medical work. Better care, better service, more adequate care, safer care for mothers and their babies must be the ultimate result.

Any improvement or extension of our medical care for mothers and babies must involve an additional outlay of funds. Existing institutions already labor under financial handicaps. Their work is hampered by lack of sufficient funds to carry out many of the plans already under way. If additional support is available and proper standards of care can be established, much can be done to improve the quality of care in existing institutions. Furthermore, the services of many of these institutions can be extended to include many more patients. It has been estimated that the occupancy of available maternity beds is less than 50 percent. Many of the institutions are not suitable for the care of mothers and babies. Others, however, can be improved and their services expanded to meet the special needs of obstetrics and pediatrics. Federal aid has already made possible an excellent beginning in improving the care of mothers and babies. This work must be continued and extended.

Chipman has said that "if it is important to be in the world at all, and most of us act as if it were, the manner and safety of our entrance is surely a first consideration." It is surely the concern of the Government to provide for its future citizens a safe conduct into their world. The future of America rests with the generations yet to be born. Let us continue to strive for safer motherhood so that all our mothers and babies may continue to receive the best that medical care can offer in our more abundant life.

DISCUSSION

The CHAIRMAN. The discussion under the heading of professional resources and ability to provide good care will be started by Dr. Fred L. Adair, who has had so much to do with the planning of this conference. Dr. Adair is professor of obstetrics and gynecology at the University of Chicago School of Medicine, chairman of the American Committee on Maternal Welfare, and one of the pioneers in the struggle to improve maternal care in America.

Dr. ADAIR. All education should be progressive and continuous as to both content and method. This applies to the science and art of medicine, where the advances in the science have been extremely rapid in the past two centuries, though the progress in the art has not been so striking.

Medical leaders have been and are aware of many gaps in our knowledge of the medical sciences and have striven and are striving to fill out the deficiencies.

The art and science of obstetrics, particularly the latter, have made noteworthy progress since the subsidence of the special privilege of the midwife. Much of this progress has been handicapped by and accomplished in spite of religious, popular, and professional prejudice and opposition.

Against such antagonisms Simpson, the great obstetric leader, fought successfully the battle for the use of means of relieving pain during labor. Pasteur established the fact that the tiny bacterium known as the streptococcus was the cause of deaths from the then and now dreaded puerperal fever. His epoch-making discovery was greeted with skepticism by most of his cynical confreres. Our own literary seer, Oliver Wendell Holmes, wrote a scientific essay on the contagiousness of puerperal fever and met with the opposition of many of his professional brothers, who argued that a doctor must have clean hands if he was a gentleman and, therefore, he could not carry such a pestilence to a mother suffering in labor. Now we know from the work of Lister and others that there is both surgically and obstetrically a great difference between the clean hands of a gentleman and the aseptically clean hands of the obstetrician.

The leadership of medical men has not been lacking in the fields of education and it has not been exclusively in medicine. Philadelphia was the nest in which obstetric education in this country was hatched. Chipman, influenced by his European medical education and his contact with Simpson and others, brought ideas regarding obstetric education and training, which were developed in Philadelphia. To Ballantyne, of Edinburgh, goes the credit for establishing the scientific bases of antenatal and neonatal care. Dr. Helen C. Putnam, of Providence, furnished the incentive for the formation of the American Association for the Study and Prevention of Infant Mortality, from which organization was developed the American Committee on Maternal Welfare. The eminent obstetric teacher and investigator, the late Dr. J. Whitridge Williams, contributed his energy, time, and advice to both these organizations.

While the time allotted permits only a short sketch of some of the high points in the leadership of medical men in the field of maternal care, I wish to depart from the main theme to stress the important part that the nursing profession has played in the develop-

ment of the program for the conservation of the health and lives of mothers and their babies. The example of the illustrious Florence Nightingale has brought the solution for many complex medical problems through the unparalleled development of nursing education and service in this country. The medical profession of this country relies upon the nursing profession, and the services of the doctor and the nurse should be completely cooperative, whether rendered to the individual patient or for the benefit of the community.

In times past and to a large extent at present, health activities have been individualistic and curative, but there is a general tendency to shift to the idea that prevention and early detection are of greater importance both individually and collectively, and the tremendous importance of this more recent point of view cannot be gainsaid.

The knowledge of how to obtain good health and the willingness to apply the remedies prescribed are prime requisites for the maintenance of health and happiness. It is desirable that everyone be taught the necessary facts relative to personal and public health. It is essential that teachers have the knowledge, the ability, and the facilities for imparting it. If our citizens desire to obtain the education and the service necessary to secure and maintain good health, they will have to provide the required facilities for both the imparting and the applying of this specialized knowledge.

Medical education is just as essential for the securing of health by the individual citizen and by the community as fundamental education is for the preservation of democracy. General medical education and training in this art and science are just as requisite for general good health as specialized fundamental education in obstetrics is to the health and safety of mothers and their babies.

Points of view with reference to human relationships are changing with the passing years, and ideas with reference to the conservation of human lives and health are being altered. The attention of many persons who have realized the importance of some of these problems to individuals and to society has been focused for some time past upon the infants and the mothers of our country. Our Government is not alone among those of the world in recognizing and attempting to solve some of these vital problems.

Medical leadership has been present, but new and changing ideas do and should meet with wholesome opposition. Antagonism has not been lacking and will continue until a satisfactory solution has been reached. The inadequacy of maternal and early infant care has been a problem confronting the medical profession for a long time. Some medical men realized this many years ago, but the active movement for better prenatal and maternal care was started in this country about 1908. Since then this program for securing better and more adequate maternal and infant care for all has become Nation-wide. Some of the leaders developed the ideas of combining their individual efforts into a collective endeavor, and as a result in 1919 a group of medical men who were intensely interested in maternal care formed the joint committee on maternal welfare, which since 1933 has been called the American Committee on Maternal Welfare.

At first only 3 organizations were represented and now there are about 20. Of the original representation on the committee, two

members are still active in promoting its objectives. The component organizations now comprise most of the national and regional professional societies that are interested in providing better maternal care. The representatives of the various organizations who serve on this committee are leaders in the promotion of maternal care throughout the country. Some are teachers of note in the field of obstetric education.

Through its activities and the leadership of its members the committee has been a constant stimulus to the medical and nursing professions and to lay groups. Some of its members have led in the accomplishment of outstanding results in some States and localities. This organization has continually urged and encouraged the medical societies of the various States and counties to form committees whose function would be to study and find the solution for their own maternal-care problems. I believe that this plan, which has been developed during the years, has been an important factor in promoting the various State programs for better maternal care. The committees of the medical societies working with the various governmental agencies have brought about better understanding and cooperative effort that is slowly but surely securing adequate maternal care for the mothers of this country.

We realize fully that various communities present varied problems for solution and that the persons who are best able to solve them are those who see them close at hand. Certain fundamental principles apply to all, and any satisfactory solution must recognize this fact, but the details and the methods of obtaining the desired results vary tremendously. It is highly desirable that sound but diverse plans be tried under appropriate leadership. It was with many of these ideas in mind that the American Committee on Maternal Welfare began about a decade and a half ago to stimulate the formation of State and county committees of the medical societies to study the local maternal-welfare problems and attempt to find the proper solution. Local studies have been made and many factual data have been assembled, which have been and are being used to evolve plans that will eventually solve many of these troublesome but vital problems.

Adequate maternal care depends for its success, of course, upon the general progressive education of all those who are either to give or to receive this service. It should be given to all the mothers of this country in as nearly perfect a manner as possible. It can be given only by doctors and nurses who know what to do and how to do it.

Over a period of nearly 20 years, with these ends in view, our committee has carried on extensive correspondence, circulated pamphlets, and held numerous meetings of committee members; in addition it has held three successful annual meetings with formal programs. Our total expenditure in money has been about $3,000; in volunteer time and energy a tremendous amount has been given.

With so little money available we have been unable so far to attempt lay education. Recently, however, we have sponsored and developed a sound-on-film movie, "The Birth of a Baby," which we believe to be something new and valuable in lay education relative to maternal care and in rational education regarding sex. We are struggling to bring this picture to the attention of the mature minds of the public.

Our committee members are now promoting the American Congress on Obstetrics and Gynecology, which will be held in September 1939. The objective of this congress is primarily education for all professional groups who are directly interested in maternal care and problems of human reproduction. We are interested in promoting better obstetric education for doctors, nurses, and others who are concerned with maternal care. This education should not cease when the doors of the schools close behind the recent graduates; it must be continuous and progressive in order to secure the best type of maternity service; and it must inculcate the point of view that maternal care is preventive as well as curative and that it is for the benefit of both society and the individual mother.

The CHAIRMAN. The discussion will be continued by Miss Hazel A. Corbin, general director of the Maternity Center Association, New York City, and for many years a leader in the effort to bring before the public the need for better care for mothers. In recent years one of her main interests has been education of nurses and nurse-midwives.

Miss CORBIN. Better care for mothers and babies—that's what we are here to talk about, and that implies that the care is not what it should be. The implication is correct. There have been other meetings such as this. We come and are stirred to the depths by the thought of mothers and babies dying or, even worse, invalided for life from lack of care. Then we go home and, as far as results indicate, we forget. It is strange that we do that. Basic to all in life is birth, and it should be surrounded by every known safeguard.

What do we need from nurses in this safe care we are striving toward? Whether it is in home or hospital, we need cleanliness, the very essence of it, from nurses who know the needs of the mother during pregnancy, labor, delivery, and the needs of the mother and baby during that first month that follows. Then it is that babies die from manhandling, neglect, cold, and a thousand other products of ignorance.

"But haven't we nurses sufficient in number and qualified to provide safe care?" you ask, and I tell you "No; a thousand times, no." It is impossible to divorce any discussion of nursing from the other resources essential for safe maternity care, because the chain is only as strong as its weakest link. Good nursing care combined with poor medical care or poor hospital care, or any other combination of good and poor care, is what results in our daily toll of preventable deaths of mothers and babies. All care must be good. In too many hospitals from coast to coast of this great country, all three are poor—poor medical service, poor nursing service, in substandard hospitals.

About half the mothers are delivered in hospitals; the others in their homes. The nurses who nurse them give the quality of care they learned to give in our hospitals—and so!

Perhaps you are asking yourselves: "Haven't we schools of nursing? Aren't nurses licensed to practice?" The good schools of nursing I can count on my fingers. But we have hundreds of schools of nursing that operate not primarily to teach nurses, as their name implies. No, they operate primarily to get cheap nursing service for a hospital. And it is cheap in quantity and quality.

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But the community pays, both ethically and in dollars and cents. It exploits the sick; it exploits mothers and babies; it exploits student nurses. They do not know that before entering a school of nursing they should ask such questions as this: "Do you have an adequate budget for your school of nursing, separate from your hospital budget, or is this school operated by the hospital to provide cheap nursing service?" Do you in this audience know the answer for the hospital in your community?

Every State licenses nurses to practice. State requirements differ, but in New York State, where 37,000 licensed nurses practice, 40,000 unlicensed nurses also practice, and the public has no way to tell one from the other.[1]

Now what should we do about it? That question has been answered. Years ago the well-known Rockefeller-Winslow-Goldmark report told us what to do. The 1930 White House Conference report says in effect: "Our survey shows that nurses now practicing know practically nothing about the essentials of safe maternity care." And there followed recommendations as to how to improve this. The committee that studied methods and practices in nursing schools all over the country pointed out in printed reports the flaws and the remedies. The Standard Curriculum for Schools of Nursing, published by the National League of Nursing Education in 1919, outlined standards for nursing instruction that today, nearly 20 years later, are not applied in practice. A Curriculum Guide for Schools of Nursing, published in 1937 by the National League of Nursing Education and prepared by the ablest authorities on nursing education in the country, outlines in detail the what and how of teaching nurses obstetric nursing. If the standards outlined in this Curriculum Guide were put into practice in all our schools of nursing all over the country, it would revolutionize the teaching, and in a few short years nurses graduating from these schools would know maternity nursing at its best.

Until enough of these well-qualified nurses are available to give better care to mothers and babies, we must go on with our patching-up programs. The nurses now in the field will do a large share of maternity nursing for years to come. They must have added education in maternity care. This means postgraduate courses. Those now are inadequate and in most instances given primarily to get cheap graduate-nursing service for the hospitals.

You ask what we as citizens can do about anything so complex? In any community the work is as good as the workers, and the standards of the workers and the services represent what the community asks of them. When you in your communities decide that maternity must be made safe for mothers and babies, you will not permit these exploitations. You will organize a committee for safe maternity care and together with doctors, nurses, hospital officials, and health officers—

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[1] The new Nurses' Practice Act of New York (Laws of 1938, ch. 472), which became effective on July 1, 1938, prohibits anyone from nursing for hire unless licensed as a "registered professional nurse" or as a "practical nurse." Provision is made for temporary licenses, valid until July 1, 1940, for those nurses now practicing.

You will work to stop the operation of substandard hospitals that give dangerous, incompetent, and unclean service to maternity patients.

You will work to stop the operation of schools of nursing that do not function primarily to educate nurses.

You will work to stop the practice of women who pose as graduate nurses.

You will work to prevent mothers from becoming the innocent victims of incompetent medical and nursing practice and below-standard hospitals.

We have resources in this country. We have obstetricians second to none in the world. We have some nurses, not enough, who are well qualified. We have money; we have physical equipment; we have official and voluntary health agencies. Yes, we have these things, but we have much more. We have a Nation made up of people who never fail to respond to a call for help from those in need. And what is greater than all of these, we have young men and women graduating from our colleges each year, filled with the desire to serve and interested in medicine and nursing.

Let us harness all these resources together and answer the call of the mothers.

The CHAIRMAN. Miss Corbin has discussed professional resources, and the subject will be presented further by Dr. George M. Lyon, who is a prominent pediatrician in Huntington, W. Va. He is chairman of the committee on postgraduate education of the American Academy of Pediatrics.

Dr. LYON. From many reliable indexes it is obvious that better care for mothers and babies is unlikely to be as widespread as desired unless there can be provided an effective means of continuing medical education for physicians so situated geographically and economically today that such service is not reasonably available to them. It seems equally obvious that there will have to be different types of programs to reach the physicians of different communities, for communities vary widely in their make-up and in the opportunities presented for continuing medical education. It has been an encouraging sign to see within the past year an increased number of teaching centers announcing short review courses in pediatrics and in obstetrics. There has also been a noteworthy falling off in the number of short courses that permitted the enrollee to announce himself as a pediatric or obstetric specialist after a few weeks' attendance in the course. This is a desirable trend.

During the past 2 years there has been a widespread development of extension courses in obstetrics and pediatrics aimed primarily at the assistance of physicians handicapped as to their opportunity for continuing their medical interests in these fields. These courses have been developed through cooperation with the State medical societies and the State departments of public health and represent a type of cooperative effort that should be encouraged in other fields of public-health endeavor. The development of these extension courses has been one of the outstanding accomplishments in the field of maternal and child-health protection. It has been productive of good, the value of which cannot be fully appreciated at the moment. True, there is much yet to be learned about more effective means of conducting these extension education services to physicians, but rapid strides are being made and within a few years this should be one of the most productive forces at our disposal for the promotion of better maternal and child-health protection. I want to make a plea

for an even more generous support of this program in the future. As yet we have no adequate yardstick with which to measure the effectiveness of this educational endeavor, but I wish that it were possible to present before you here today at this conference some of the appreciative, earnest physicians who, deprived of proximity to inspiring medical centers and working long hours daily in arduous physical toil in their not-so-profitable rural practices, have been deeply moved by the brief opportunity brought to them by an extension course of this type. You would not question the value of such endeavor if you could enjoy, as others and as I have done, the great pleasure of taking to these handicapped physicians bits of simple information that aid them materially in the care of the newborn, in the problems of growth and development, and in preventive pediatrics. We can see that we are helping them, and that by going over their common problems we are easing their pediatric burdens and making better care for babies a simpler and more readily achieved practice.

It is to be remembered that prior to the activity of the Children's Bureau in fostering the development of such extension courses many State medical societies appreciating such a need had developed and financed programs of one sort or another aimed at an extension type of postgraduate instruction for physicians removed from medical centers. Pediatrics and obstetrics did not play a very prominent part in any of these programs, which were devoted mainly to problems of general clinical medicine. In the development of such extension courses in obstetrics and in pediatrics, with Government aid, a movement born within the medical profession itself was furthered. Indeed, at first it was a little confusing to physicians to think that the Government would aid in bringing to them postgraduate instruction in pediatrics and obstetrics. Each year will find a greater appreciation on the part of the physicians and a more effective utilization of the educational services provided. This program has engendered a kindly feeling between the physicians themselves and the cooperating governmental agencies, a feeling that will doubtless do much to further a readier acceptance of reasonable programs for better care of mothers and babies. During the fiscal year 1937 more than 6,000 physicians attended postgraduate courses in obstetrics and more than 5,000 attended postgraduate courses in pediatrics.

The care of the newborn should be one of the most important phases of the pediatric extension course. It is one in which there is generally a great interest, for physicians as a rule realize their handicap in the care of the newborn. Of course, the vast majority of the physicians attending these courses deliver mothers in rural homes rather than in hospitals.

The obstetric and nursery services in most of the small general hospitals in the five States with which I am most familiar are woefully inadequate. There should be some general movement to bring up to a fairly adequate level the minimum standards of the nurseries in all the small general hospitals. This might be done by a form of certification developed through a group representing the appropriate medical, obstetric, pediatric, and hospital organizations. When a nursery is certified as possessing certain equipment and as employing the proper number of properly trained personnel, then this nursery

should be broadly advertised to the lay public as a place where acceptable nursing service is to be had for the newborn.

As public-health education increases, and as better obstetric and newborn care is desired by the laity, it is important that means be developed whereby the laity may be assured of obtaining from the hospital to be entered at least a reasonably good minimum of adequate obstetric delivery-room service and of nursery service for the newborn, including for each service adequate facilities of plant and equipment and a nonmedical staff of appropriate numbers, properly trained. The improvement of nursery services for the newborn is one of the most important problems facing us today in the small general hospitals.

The CHAIRMAN. The closing speaker in this brief discussion period will be Dr. C. Rufus Rorem. Dr. Rorem is director of the committee on hospital service of the American Hospital Association and is an authority on hospital organization and administration.

Dr. ROREM. I would like to make my contribution to this discussion by shifting the emphasis from the clinical or technical phases to the economic and social aspects of maternal and child health. I do not wish to imply that the clinical and professional phases of the care of mothers and babies are unimportant; in fact they are so important that their appraisal must be made only by qualified professional groups. Standards of medical and hospital care should be improved in every possible way. Hospitals in their service and educational programs should not exploit students or graduate nurses. Professional groups should not exploit the hospitals or other medical institutions.

From the public point of view the problem of better care for mothers and babies is not merely one of improving the existing standards of medical care and health service. It also includes the task of getting the available services to the people. The task is not merely to "make the jam," but to "get it off the shelf." It is in this latter aspect of the problem that I have been concerned as a student of hospital administration and as an economist representing the point of view of the general public.

The recent years have witnessed two definite trends in the care of the sick including obstetrical and child-health services. The first observable trend is an increasing use of institutional care for maternal and child-health service. The proportion of births in hospitals has increased from year to year and the well-administered maternity hospital or obstetrical division of a general hospital is regarded as the place where the best quality of obstetrical care can be obtained in each community.

It has been explained here today that adequate obstetrical service can be rendered in the home for the normal delivery. The hospital, however, is recognized as the place for the care of an unusual condition or for surgical procedures connected with childbirth. From the social and economic point of view the hospital must be regarded as superior to the home because of the available personnel and facilities. If the hospital has professional advantages in the case of an emergency, it also has the same professional advantages for an average situation.

Improvement of the general health becomes in part a task of making hospital care available at the lowest possible cost to a larger

proportion of the population. This task has many phases which need not be discussed in detail at this meeting. They include, however, the following: The erection and maintenance of hospitals in areas which are not now served; the coordination of various hospitals in each community; efficient management of those institutions which are already in operation; adequate financing by individuals and the public for the necessary care for acute illnesses; the special adaptation of hospital facilities for the better care of mothers and babies.

The second trend observable in American life is the development of a procedure by which adequate hospital care for acute illnesses (including maternal and child-health service) can be placed in the family budget along with other necessities. One such procedure, which is a form of voluntary health insurance, is commonly known as group hospitalization. Large numbers of employed persons make equal and regular payments into a common fund which is used to pay hospital bills for subscribers requiring care. Approximately 2 million persons are placing hospital care in their family budgets.

Special nonprofit associations have been formed in more than 40 cities with upward of 500 participating hospitals. Subscribers are entitled to hospital care for any acute illness including obstetric and pediatric services. More than 100,000 persons have had their hospital bills paid in this way. These plans are organized primarily for the benefit of the public and not for the benefit of the hospitals. The American Hospital Association has established standards for their control and has issued a list of approved plans which conform to these regulations. None of the free-choice, nonprofit hospital-service plans has failed to meet its obligations to subscribers or to participating hospitals.

The inclusion of maternity benefits has proved to be practicable in the various hospital-service plans. Hospitalization for maternity care involved a relatively large expenditure in every instance. Moreover, from the point of view of the family budget, maternity hospitalization must be regarded as an unpredictable expenditure because individual attempts to budget this cost may be disrupted by some other unpredictable illness.

The American Hospital Association is not interested in developing the services of the hospital beyond the limits which will improve the public health nor is it interested in the development of expensive services where economical considerations are overlooked. For that part of maternal and child-health service, however, which can be best rendered in or by hospitals, the American Hospital Association has a continuing and vital interest. This applies to both the efficient management of the institutions themselves and public organization for purchase of this care.

The CHAIRMAN. We shall turn our attention for the next paper to the matter of "Community Resources," and under that heading our first speaker will be Dr. Felix J. Underwood. Dr. Underwood is executive officer of the Mississippi State Board of Health, chairman of the child-hygiene committee of the State and Provincial Health Authorities, and for many years was director of the bureau of child hygiene and public-health nursing in Mississippi under the Sheppard-Towner Maternity and Infancy Act.

Community Resources and Ability To Organize for Good Care

By FELIX J. UNDERWOOD, M. D., *Executive Officer, Mississippi State Board of Health*

Community resources and organization for good care for mothers and babies must take into consideration State and local health agencies; health education for medical and lay groups; organization of obstetric and pediatric service with qualified consultants; good bedside care in homes; efficient hospital care; correlation of medical, health, and social services; and, last but not least important, sufficient funds to administer and maintain effective services.

As far as the need for such organization is concerned, we have known of this for years. We are well fortified with facts obtained from careful studies by experts of the various conditions that affect the welfare of mothers and babies. We are aware that maternal and infant morbidity and mortality vary inversely with the family income. We are conscious of the need for health education of the people. We recognize the value of efficient consultant medical service. We realize that bedside care in the homes is woefully lacking. We are conversant with the need for well-equipped, centrally located hospitals, under efficient management, and not run for too much profit. Really, no profit at all would be far better, because giving good service and making a satisfactory profit are often rather incompatible.

We are mindful of the wide range of care, from the high type given by well-trained and skillful obstetricians and pediatricians to the other extreme given by poorly trained or careless practitioners. We are in possession of enough facts, I believe, and I think that it behooves us now to get a toehold on the situation without further delay. The feeling of hesitancy in regard to the initiation of medical care for the medically needy as a public-health function by physicians and dentists is waning. Not only many individual physicians but the medical profession recognize the problem and show the desire actively to participate. From the preliminary report of the national health inventory by the United States Public Health Service in 1935, we quote briefly:

> It is becoming widely recognized that physicians and hospitals cannot be expected to render service to the indigent without remuneration; that there must be public responsibility for medical care of unfortunate people who otherwise depend upon the charity of physicians.

The physicians, I suppose, are willing to go on, but it should no longer be necessary. They cannot meet the situation adequately, no matter how hard they try. I know that because of the hundreds of death certificates every year unsigned by physicians.

The quality of medical care given by private practitioners depends largely upon the extent to which they keep abreast of the medical discoveries of modern scientific research. The knowledge of newer trends acquired from accredited universities, with allied efforts of health authorities, by instruction at medical centers and in the field undoubtedly gives incentive to improvement in service. Health officials and workers also badly need this type of instruction. Then with the aid of qualified consultants they may be equipped to travel in the vanguard of newer developments.

Public-health nurses with vision, ability to evaluate conditions, and patience to prosecute a vigorous campaign gently but persuasively are needed. The public-health nurse can do much to inculcate in members of the home correct attitudes toward family situations. In many instances she must combat ignorance and indifference and often the inclination of the mother to sacrifice. She must teach that maternal and infant care is an integral part of family-health service. The public-health nurse may give valuable aid especially to the rural physician, who is often confronted with the necessity of managing labor and delivery in most difficult situations. She may demonstrate to the mother how to prepare and have in readiness clean equipment; she may teach the mother how to prepare herself physically and mentally for the ordeal; she may instruct a member of the family or an attendant how to assist; and she may suggest changes or improvements that will facilitate arrangements.

Home contacts must be extended in the community by various means. Social or civic clubs or committees under guidance may be stimulated to aid in the preparation of layettes, obstetric kits, or other supplies. Volunteers may be enlisted to render various services, thus arousing interest and bringing valuable support. The aid of philanthropic individuals or agencies must be solicited when there is need.

Bedside care given in rural homes at the time of confinement is a question under much discussion. This activity has been conducted for years by visiting-nurse associations in urban areas and, although in rural areas the administrative problems are more difficult to manipulate, my prophecy is that it can and will be extended rapidly. True, in rural areas, on the one hand, besides the cost of service and equipment, there is the time-consuming and often hazardous night driving, the difficulty of even distribution of service to physicians of all areas, the problem of arranging for day and night telephone service and relief schedules. Yet, on the other hand, in areas where this work has been done there is evidence of appreciation by physicians, enthusiasm of nurses, interest of the public, and, greatest of all, much better care for mothers and babies.

Generally speaking, the need for care during the prenatal period is better understood by the public than is the importance of expert procedure and technique during delivery and aftercare. We have probably oversold ourselves on prenatal care and too much is expected of prenatal care alone. Even with good prenatal care and aftercare, without good care at the time of delivery we have a gap that should be bridged and I think will be bridged very shortly. Yet just as the various stages of labor, to be safe for mother and baby, must progress expeditiously from the beginning to the end, so must the entire cycle of pregnancy, confinement, and convalescence

progress in smooth sequence, under expert care, to a happy conclusion. Trained personnel, alert and vigilant to the minutest details throughout the cycle, are needed. Of what avail is meticulous care during the prenatal period if it is ruined by faulty technique during confinement. Of what use is adequate equipment if it is not properly utilized. How little is gained if a separate bed is prepared for the infant unless he is carefully handled and placed in it safe and warm.

In considering plans for the protection of mothers and babies it must be borne in mind that optimum care will not be obtained until the father properly evaluates this care; the mother under care of a competent physician from early pregnancy follows instructions; the medical student receives adequate training; the private practitioner keeps abreast of the latest trends in obstetrics and pediatrics; expert consultant service and hospital care when needed are available; all public-health personnel serve and teach effectively; and the general public appreciates the need and realizes its responsibility.

Initial efforts to teach in the home must extend to community life until such interests are fully aroused and motivated into vigorous and continued action. This type of service is now available to comparatively few mothers and babies. However, the day is here when enough informed people realize that efforts in the past have merely scratched the surface and there is so much to do. Yet these efforts are crystallizing sentiment and leaders are urging that funds be supplemented by local, State, or Federal agencies to establish and maintain efficient service and stabilize programs. There is no question of the need, nor should there be a question of justice and the right of the governmental agencies to provide adequate medical care for those in need of such services. Health services for mothers and babies obviously can progress to a high standard if and when economic, medical, and social resources are blended and developed.

We are intelligent enough to realize and honest enough to admit, I believe, that each State must have qualified professional public-health personnel with good training and experience, funds to pay qualified local physicians and specialists for their services to mothers and infants, more hospital beds for maternity care or at least a diagnostic community center—a community-health and medical center—providing examining rooms, laboratory, and X-ray facilities for the use of local physicians.

The need for better standards for hospital care for maternity cases and for care of newborn infants is apparent, as is also the need for safer home deliveries. If we meet our responsibility and our opportunity as leaders for better care for mothers and babies in our country, we shall not forever confer, discuss, and always agree as to the great need but often disagree as to ways of meeting the urgent need, postponing time and again taking humane and necessary action for the solution of our fundamental and most important health problem—that of lowering the unnecessarily high death rate among the mothers and babies of the United States of America. Instead we will now arise in our combined strength and knowledge to see to it immediately that title V, part 1, of the Social Security Act be amended to authorize a larger sum of money to be appropriated to the States, with the provision that the increased payment shall be for improvement in maternity care and care of newborn infants and for training personnel for these important programs.

Such authorization should by all means provide for gradual development of the program on a sound basis of good quality of service, and for necessary increases in the appropriations until a sum is reached that will insure care for all women who are unable to obtain care otherwise, whether for economic reasons or because of inaccessibility of care in the community in which they live.

There is great need now for a fusion of technical and professional services into family and community life all over this country. Then, and not until then, will mothers and babies have adequate care.

DISCUSSION

The Chairman. The discussion of community resources will be started by Dr. E. L. Bishop, who was formerly State health officer of Tennessee and is now director of health of the Tennessee Valley Authority. Dr. Bishop is also chairman of the committee on administrative practice of the American Public Health Association.

Dr. Bishop. There are two points in connection with Dr. Underwood's discussion that might be made somewhat more emphatic. The first is his reference to the integration of community resources. I believe that the program that has been the theme of discussion must comprehend the social and economic circumstances under which children are born. That opinion has been reiterated by practically every speaker, but unless and until we recognize that the home is the unit of the community and the individual citizen is the unit of society, we shall not plan our services as wisely as they can be planned nor utilize our resources to the fullest extent.

We must not permit dissociation and incoordination to disarticulate service, but rather we must integrate our purpose and planning into a complete pattern in which each aspect is properly related to every other aspect.

What is the most basic community resource for maternal and child care? I think it is obviously the basic economy of the community—agriculture in the rural area, wages and hours of industry in industrial areas.

This leads to the second point, which is equalization in the distribution of resources between communities. I think that is the real point of this conference, first as related to birth rate, second as related to the economic opportunity of the community or region, or the ability of the community or region to purchase service for its people.

Obviously, until such time as economists and social scientists evolve measures equalizing our diverse economic resources, some national agency must concern itself with the equalization of the opportunity to be born alive of a living mother, for this situation does not admit of solution within the community itself.

The Chairman. Dr. Carl V. Reynolds will continue this discussion. Dr. Reynolds is the State health officer from North Carolina.

Dr. Reynolds. I have only this to add, that in my opinion community resources are wholly inadequate at the present time. There are serious problems confronting us. If a mother is worth while, then maternal care is a problem. If a child is worth while, then child care is a problem. If the maternal death rate is as high as it has been represented by the speakers today—and who would doubt it?—then

the maternal death rate must be reduced. If infant mortality is in a similar position, surely infant mortality must and shall be reduced.

We know the way, Madam Chairman. What we need is the means, and I believe together we can secure that means in order that every child born may be born in health so that he may compete for his proper place in this world.

The CHAIRMAN. Thank you, Dr. Reynolds.

It is a great honor and a very happy privilege to present the next speaker to this audience. Already our conference program has been enriched by the contributions of those who to the outside eye would seem not immediately to belong in this conference. It proves that persons in all avenues of life have an interest in what we are doing in this conference today and tomorrow. We are very glad that we have the opportunity to have with us for our next address the mayor of the city of New York, the Honorable Fiorello LaGuardia.

As we have followed the history of Mayor LaGuardia's connection with public service, we have felt again and again that he represented the finest type of American citizenship in that he always made, from his boyhood days, a response to civic conditions. In one capacity or another he was aware and functioning as far as his individual duties and privileges as a citizen are concerned. I could introduce him as president of the American Mayors' Conference and as mayor of the largest American city; I could introduce him in terms of his public service here in Washington, in the State of New York, as well as in the city of New York, but with his permission, I should like to introduce him as an American citizen interested in presenting to this group, as we consider the health of mothers and children, this topic that is ours, as it is his, "The Challenge to the Citizen."

The Challenge to the Citizen

By the HONORABLE FIORELLO LAGUARDIA, *Mayor of New York City*

I am rather embarrassed by the nature of this conference. Everybody seems to be in accord, and I cannot help thinking that I would have reversed the whole situation. I would have these very splendid papers that we have heard read this afternoon, that you heard read this morning, presented to an entirely different audience. I just do not see the use of talking to ourselves.

I would have invited here the Governors of the 48 States, the majority and the minority members of the State legislatures, and the leadership of the House of Representatives and the United States Senate. Then I would have turned Dr. Parran loose on them and the others who gave distinguished and scholarly papers. It would have been very useful.

You see, it is not ideas that we need. It is money that we want. We have all the ideas on public health, but we have not sufficient application of what is known about public health throughout the country.

One of the speakers pointed out the difficulties in rural counties. He mentioned that in some counties—and they are generally the large counties—there are no medical services at all, and it is difficult to get proper medical care.

I was very much amused to see how the distinguished representative of the Department of Agriculture labored on the surplus. He is accustomed to surpluses. Of course, he did not go quite so far on the question of surplus production as they do over in that Department, and he wouldn't recommend the same remedy.

But that does bring out a very interesting situation, which for the purposes of these discussions we may properly ignore, but which we cannot ignore when we take the whole picture into consideration; namely, that medicine has made greater strides and greater progress than government or economics. In other words, medicine has been able to progress to such an extent as to reduce mortality and prolong life, while our economists and statesmen seem to try to drag along. You see, the medical profession hasn't been hampered with experts on constitutionality. Imagine what progress would have been made in medicine if someone was always carping and protesting: "They didn't do that in 1789 when the Constitution was adopted," and insisting upon medicine's holding back to the practices and customs that were accepted at the time of the adoption of the Constitution.

Progress has been made. I came here to tell you how much progress we had made in New York City, but I have been sitting beside a lady for the last three-quarters of an hour who has deflated me of those ideas, and I decided we were not so good there after all. Still,

I think we have made some progress, and what New York City can do, other cities should do.

We have extended our health service and the results are most gratifying. We have extended our health-center idea by constructing and opening a series of health centers throughout the city, where we have clinics — medical, tubercular, venereal - disease, prenatal - care, and baby-health stations. We see the results. We have improved our hospital service, all of which is part of the greater health program.

I firmly believe, and I think that is the purpose of this conference, that every section of this country is entitled to a proper public-health service. It is of no value if certain sections of the country make proper provisions for preventive medicine if it is neglected in other sections of the country. A germ or a microbe cannot recognize a State line and he is not hampered by interstate-commerce laws.

The picture given here a short time ago by the gentleman from Chicago, I believe, speaking on obstetrics, showing the lack of service in the rural districts, indicates the necessity of Federal aid for those sections of the country.

The minute we talk about Federal aid, we come up against the same old question about local autonomy and the assertion that "local people can do it better." Well, I am not going to dispute that at all, but I say this, that if a State or a county or a municipality fails to give the proper health service to the people under its jurisdiction, then it becomes the duty of the Federal Government to step in and do it to protect the rest of the community.

Proper medical service is no longer a luxury, and it is a sorry community in which a death results because a family could not afford a physician.

We have our difficulties in New York City. We have a hospital budget slightly over $26,000,000. We have a health-department budget of a little over $5,000,000, and we have some $14,000,000 that we pay to private hospitals for the care of city charges, so you see that is quite a burden to carry. Yet it is not enough, and the load is growing so rapidly on our public hospitals that we just cannot keep up with it.

Since the beginning of my administration, in the past 4 years, we have built 11 hospital buildings. We are providing now for an additional tuberculosis hospital in the county of Queens, with a capacity of 500 beds, and another with a capacity of about 200 beds. We will have additional facilities at Bellevue for about 100 additional beds and at Seaview for 200 tuberculous children. When these buildings are completed we shall still be short of proper and sufficient beds for tuberculous patients in the city of New York. That brings up another important factor in public health, and that is public housing.

Unless we have proper housing, unless people live in sanitary surroundings and have sufficient and proper nourishment, the rate of tuberculosis will increase faster than hospital accommodations can be provided. So in this great question of public health you have housing; you have the economic condition of the family. The gentleman from the Department of Labor gave you some very startling figures on that, but I believe he was a little high in his statement that the

$1,200-a-year families spent what he said they did for medical care. Judging from my budget, I think we take care of that almost entirely.

Of the cases that we have on relief in New York City, we have about 196,000 on home relief and about 133,000 on work relief. For our cases on home relief—our 196,000 cases—we provide medical care. We have worked out a system that seems to be satisfactory, through the medical profession. We have a panel of doctors in each section of the city, and when illness occurs in a family on relief, the family reports it and has its choice of doctors on that panel, or a doctor is assigned and we pay $2 for each visit and provide the necessary medicines.

If it is a home-treatment case, we take care of it in that way, and if it is a case requiring hospitalization, we provide that and pay for it. So that the people who are on relief by reason of unemployment get complete and proper medical attention.

Frankly, I believe that there is a great need in certain sections of this country, and particularly in rural districts, not only for maternal care—prenatal care and care at the time of childbirth and care of the infant—but there is a great need, to a degree I would say of almost national concern, to provide proper clinics in every section of this country, particularly for tuberculosis and venereal disease. There is no use trying to avoid that any longer. And to do this we require that Federal aid that I mentioned a few minutes ago. I do not care how the Federal aid is brought about, whether it is through matching aid to States and from the State to the community, or just how this aid is given, but aid must be given because it is a matter of national concern.

I want to point out just one more thing. There are two ways you can approach this. You can take the humanitarian approach, which I call the true American approach, of saying that people in this country are entitled to health, have a right to health, and from the very moment of birth should be provided with proper medical care, and if that care cannot be provided on account of the economic condition of the family, then it is the duty of the Government—the State, the municipality, I don't care which—to step in and provide that care.

If you take that approach, you are likely to be charged with being paternalistic, and after that you are charged with being radical, and if you suggest Federal aid, some lawyer will step up and say, "You can't do it; it is unconstitutional!"

But you may take another approach, and then it is "patriotic." If you take this approach—and you get the same results—you can say: "The Nation must at all times be ready to defend itself, and public health is a matter of national defense. So the Nation has a concern in this expectant mother because her baby might be a boy, and if it isn't a boy, it might be the mother of a future boy, and we want that little boy to grow up healthy and strong. You cannot put teeth in his mouth when he gets to the draft age, and we want him healthy and strong, with all his teeth in his mouth. We want to keep him healthy when he is a young man; we want to prevent communicable disease." And so it becomes a matter of grave concern, regarding the defense of the country. And you will get away with it.

We can take either tack, as long as we get results, and what I want to say is this: With the progress made in medicine, the progress made in medical science and preventive medicine, knowing, as we do, that life can be prolonged, that death and morbidity can be reduced, then it is not the challenge to the citizen; it is the challenge to government—Federal, State, or municipal—if it neglects its duty in affording the proper protection to its citizens.

The CHAIRMAN. We do not want to close the afternoon program without giving you the opportunity that is promised on the program for discussion. If there is a brief discussion or a question that can be answered by the galaxy behind me or someone on whom I shall call, like Dr. Mustard, in front of me, we shall be glad to have it at this time—either statement or discussion on the subjects that have been brought up on the program or aroused in your thinking this afternoon. Is there a problem, a discussion, a statement, an application?

Dr. HANNAH M. STONE. I am medical director of the Birth Control Clinical Research Bureau.

The CHAIRMAN. May I be permitted to make a statement as chairman of the meeting and as chairman of the planning committee? When the group of organizations here represented entered into the planning of the program, it was with the distinct understanding that our considerations at this conference should be limited to the following subjects, which I shall try to state accurately.

First of all, there was welfare. I don't know that it comes chronologically, but first in our thinking as mothers, there was the thought of the newborn baby. There was also the thought of maternal welfare as it is concerned with pregnancy, delivery, and postnatal care of the mother. We understood when we came into this conference that our discussions would be limited to those subjects. Some of our organizations would not have entered into this conference had we known of other aspects to be brought up. This morning another aspect was brought up and was referred to the group authorized to consider matters which others outside the planning group think belong in this conference, but which we have not entered on our program and therefore are considering not germane to the subject of the conference.

As chairman of this afternoon's session and on behalf of the organizations that came into the conference with that understanding, I rule this question out of order, if you will so permit me. I hear no objection.

(Meeting adjourned.)

Monday, January 17—Evening Session

FORUM: HOW THE CHALLENGE MAY BE MET

Mrs. Pettengill, presiding

The CHAIRMAN. Tonight I am going to draft two men and two women to come up and sit here with me, and I shall consider them consultants, to whom I shall turn.

(Dr. Henry D. Chadwick, Miss Janet Fish, Dr. A. J. Chesley, and Dr. Lillian R. Smith were called to the platform.)

The CHAIRMAN. Thank you very much. I shall be glad to turn to you from time to time in our discussion this evening. I think we are going to have a very fine vision of some of the things that can be done that will help us in our findings tomorrow.

The forum topic is, "How the Challenge May be Met." The whole problem was given to us clearly this afternoon, as well as in the morning session. We had it emphasized from the economic angle. Knowing that there is an answer, we were told, there is but one thing left to do, and that is to find out how the answer can be made, and that will be largely a matter of finance and will be the concern of those who will help us with the economic situation.

These four questions have been given us as our responsibility, perhaps to awaken our thinking:

> To what extent is the public aware of the problem?
> How can public awareness be stimulated?
> What methods of coordinating citizen, professional, and official effort are most practical?
> What provision can be made for continuing the work of the conference?

The first three questions will engage us for a while before we take up the last one.

To what extent is the public aware of the problem? As you who are particularly interested in this matter go about, do you find that most parents, most people, most adults know about the problem of infant mortality and maternal mortality? Is it well known to the public, and if so, what publics?

Dr. WALTER L. BIERRING (Iowa Department of Health, Des Moines). I would say that in the rural communities in this country the public is becoming very much aware of it; particularly through the women of the American Farm Bureau Federation the cause of maternal health and child welfare is being extended. The local health organizations are encouraging these programs and they are being generally well received by communities.

The great difficulty is that facilities are not always available for carrying out better care. There are many counties that have no hospitals and, therefore, with the best of intention, unless they have aid from governmental agencies, they are still unable to carry out

these various programs, but I am sure that community consciousness is much more marked than ever before.

The CHAIRMAN. We are very glad to have that cheering word. We are told by Dr. Bierring, Iowa commissioner of health and past president of the American Medical Association, that there is a growing body of knowledge available and evidently accepted by many of our people. He said that particularly in rural communities more of the public know about this problem now than some time ago.

Is there someone here to speak for the agricultural group, possibly not from the professional, but from the lay public?

Mrs. CHARLES W. SEWELL (Associated Women of the American Farm Bureau Federation, Chicago). We have a very definite feeling that something must be done. We are giving our support to the work of maternal and child welfare in our program in what we think is a very helpful way. May I read a resolution that has just been passed at the meeting of the women of the American Farm Bureau and concurred in by the men, making it a part of the legislative program:

> Inasmuch as the maternal and child-welfare program of the Children's Bureau of the United States is in need of additional funds for carrying on adequate services, we recommend that we continue our support of the Children's Bureau, asking for additional appropriations so that these agencies in the United States, Territories, and possessions may receive the further extension of this additional work for their child-welfare work and in all the phases of maternal and child-health development.

That is what we are trying to do to make our people more aware.

The CHAIRMAN. That is splendid evidence that there is some widening knowledge of the need of this sort of help that we are hoping to be able to give.

Is there someone from the nurses' group who will tell us whether or not the public knows?

Miss EMILY M. KLEB (American Nurses' Association, Washington, D. C.). Madame Chairman, I am sorry I am not able to answer that question. I do know that the nurses are very much aware of the problem, but I can't speak as far as the public is concerned.

The CHAIRMAN. As you meet people, of course you talk about this, because it is an important thing in your own professional interest. When you convey the information to other people, do you find that people are surprised at the facts that we heard today about the high death rate?

Miss KLEB. Yes; I think on the whole they are.

The CHAIRMAN. Thank you. I am sure that is true, and that is one of the evidences of the need for this sort of thing. We hear that people are more aware than they were, and though we may be aware in a vague way we are not sufficiently aware in detail so that we are ready to take some interest in the problem.

We should like some words from you about this matter, Dr. Bundesen. To what extent is the public aware of the problem?

Dr. HERMAN N. BUNDESEN (Chicago Board of Health, Chicago). I don't believe I can answer that.

The CHAIRMAN. Do you think the persons you meet know about it in advance? Are you trying to sell them a way to meet their difficulty, or are you trying to awaken them to their difficulty?

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Dr. BUNDESEN. Do you mean the mothers that are to have the babies?

The CHAIRMAN. Yes; and the fathers of the babies, too. What about the public as a whole—do they know about that problem?

Dr. BUNDESEN. I don't think so.

The CHAIRMAN. We should like to have Dr. Bundesen tell us a little about that, as he has had some tremendously interesting experiences.

Dr. BUNDESEN. I know of no public-health problem that has not been successfully solved once the public knew the facts about the disease, whether it was smallpox or diphtheria, or now Dr. Parran's drive on syphilis, or any other disease. When a condition is exposed to the cleansing light of universal knowledge, it is always solved because it always maintains itself on public ignorance and public indifference.

You who have been at this meeting all day, listening patiently, must realize that essentially we know what can be done with one sweep to cut maternal mortality and infant mortality in half. Yet they are not being reduced and, in my estimation, it is not being done because the public does not realize the situation. When the public does recognize the problem, it will respond. When the public knows that it is not getting the best medical care, it will demand it. But until it knows, it will not know what to ask for. For that reason I believe definitely that it pays to advertise.

The CHAIRMAN. I should like to ask Dr. Diez, of Massachusetts, if she would tell us something about the particular angle in which she is interested, care of the premature infant, and let us see if in adding more information we can come nearer answering some of the questions that have been asked.

Dr. M. LUISE DIEZ (Massachusetts Department of Public Health, Boston). We have started a program for the care of the premature infant on a State-wide basis. It is a little early to know exactly what our results are going to be. We have established hospital centers in strategic points in Massachusetts. In Massachusetts about 70 percent of the babies are born in hospitals, so our problem is not quite the problem of many other States.

Without giving the hospitals any money, out of a possible 45, we have, I think, 30 that have become centers, equipped according to our standards of care.

We are carrying on at the same time a program of education for the private nurse, the public-health nurse, and the hospital nurse. We have been very fortunate in having a bill passed in Massachusetts, which says that the premature infant is an infant 5 pounds or under, and that the department of public health will provide transportation and the department of public welfare will pay the hospital cost for the care of infants whose parents cannot care for them.

In answer to the question of whether there is general knowledge on the part of the public, I do not believe that there is, on the part of either the rural or the urban population, to the degree that we think they ought to be informed from the propaganda that has been carried on for years. There are a number of groups that we cannot reach and have not reached yet that do not know what it is all about. I

think this difficulty is being overcome, but the main thing is that all of us, no matter what our economic or intellectual level, never apply these things to ourselves. It is lack of application of knowledge that is retarding our progress in public health.

The CHAIRMAN. You think the knowledge is fairly well disseminated among the public as well as among the professional groups?

Dr. DIEZ. To a degree.

The CHAIRMAN. Thank you very much for that contribution, Dr. Diez. We should like to hear something along this line from various persons. Would someone like to volunteer a contribution to our discussion of this matter of the awareness of the public—to what extent the public is aware? We are asking you who meet the public to make the response.

Dr. BIERRING. Dr. Julius Hess is here from Chicago. He has a very remarkable program in Chicago in the care of premature infants.

Dr. JULIUS H. HESS (University of Illinois College of Medicine, Chicago). Dr. Bundesen was very modest when he said he believed that the public wasn't aware of what is going on, because I think that everybody in Chicago knows all about his propaganda, not only for prenatal care but also for the care of the newborn. I think he sees to that very thoroughly.

In 1933, through the efforts of Dr. Bundesen and stimulated by some of those who were interested in the same subject, we started what is known as the Chicago city-wide plan for the care of premature infants. It consisted in following out the plan we were carrying on in a minor way in Sarah Morris Hospital, in that we had a station, trained nurses and wet nurses, a social-service department, an out-patient department, and an ambulance service.

The Chicago city-wide plan offers all the services that the Sarah Morris Hospital plan does, except on a broader basis. We have two large stations. The Sarah Morris station was able to care for 23 babies. The demand for that type of care outgrew facilities in 1932, and we started a station at Cook County Hospital. Last July we had 68 premature infants in that station, and on Friday of last week we had 44.

The city furnishes an ambulance free of charge that will bring infants, when the proper service or the needs of the infants cannot be supplied in the home, into one of the two stations. The county hospital offers entirely free service, and Sarah Morris Hospital furnishes a service at minimum cost. About two-thirds of the parents pay nothing.

The interesting thing about this plan is that in 1934 our infant mortality per 1,000 live births in Chicago was 47.7. (If I make a mistake in these figures, Dr. Bundesen will correct me.) In 1935 it was 41.5, and in 1936, 38.5. I believe that some more, not a considerably greater number, of premature infants were saved by this plan. But what struck me most forcibly was the reduction in infant mortality as a whole in a city of the size of Chicago. I believe the plan that was initiated under Dr. Bundesen certainly had an influence on the whole program as it concerned infant mortality, and it is something that I think might be carried on in other cities.

I happen to know something about the Massachusetts situation, because I had a good deal of contact with the people working in that department, and I think the same endeavor is made throughout the State of New York. Also, two or three other States have followed that plan to some extent.

I want to say something off this subject, if I may, in regard to what those in the profession—I am talking only for the pediatricians now—are attempting to do, not only to improve themselves but to lower infant mortality. As you know, in most of the States, at least in a great percentage of them, what is known as refresher courses have been started. I see Dr. Frederick H. Falls here, the chairman of our Illinois State planning committee, who has largely fostered the program in the State. We believe this has been a very successful thing. We send out an obstetrician and a pediatrician into the counties, and we send the men that they ask for. They may ask for anybody they wish. They have an afternoon session with a talk given by a pediatrician and one by an obstetrician, and the same thing is repeated on different subjects—and subjects always of their own selection—in the evening, but on material that has to do with child or obstetric care.

We have done something further, and we believe that this is going to work out very well. At least the initial attempt was made last summer to give 1-week courses at the University of Illinois Medical School. The students start in on Monday morning and they are through at noon on Saturday in time to go to a good football game or baseball game—usually baseball at that season of the year.

Last summer we thought we would run it for 2 weeks and it took us most of the summer to get through those courses. This year I think we shall probably run it all summer. The number of attendants was anywhere from 6 to as high as 15, and that being the first year that we had attempted this thing, we thought it worked out very well. We simply suggest this as a plan that might be introduced in various States, at least where they have medical schools.

One other thing regarding our relief-administration work in Chicago: We have a committee that works with the relief administration. We were paying obstetricians $20 for the complete care of a case, and Dr. Bundesen thought that the service rendered was not complete enough to meet his high standards. He sent us some rules, and we got together very amicably and agreed on a set of principles that would be satisfactory to the profession, to the relief administration, and to the Board of Health of Chicago. Those include practically everything that was asked for this afternoon, all the way from the Wassermann test down to repeated urinalyses, a thorough examination once a month, and once a week during the last month or two of pregnancy, taking blood pressure, and so forth.

In order to get this service, our fee was raised from $20 to $30, and the $30 is paid to all those who meet all the requirements. It is not the physician's fault, of course, if the patient does not appear until the eighth month, but if she does not get a Wassermann test, he loses $10. We found that working out pretty well and practically no one is losing fees for lack of a Wassermann test now.

The Chairman. Thank you for the case contributions that are so interesting and make us more aware of our problem, more optimistic about solving it as we see what has been done in favored spots.

Now let us turn a little more directly to the discussion as it has been put before us tonight. How may the challenge be met? The first question that is asked us is this: To what extent is the public aware of the problem?

Mrs. Gustav A. Hipke (Maternity Hospital and Dispensary Association, Milwaukee, Wis.). May I say a few words regarding the maternity problem? I have worked on the problem for over 32 years, so I hope that will give me a license to get on my feet.

I have been very much interested in the discussions today. Many interesting points were brought out, and we had evidence that we know everything about maternity care and obstetrics; we heard that from men who are outstanding in that field. We also know that there are many physicians in America who are efficient, and that the women of America have no need to die. I wish that this conference would get together and really decide upon why the women die. They have no need to die. We know what to do. We were told today why women die—because they need care in every way, because measurements are not taken, because of hemorrhages.

There is no need for those women to die. Speaking from experience, in our hospital we had over 500 births in 1 year and we did not lose a mother. It has been the habit in our city to send abnormal cases to our institution.

One of the greatest nightmares that I know of occurred when a woman had had no prenatal care and no measurements had been made. The uterus ruptured and both the mother and the child died.

The big thing that I personally feel from a lay woman's point of view is that we need a set-up in every city, and we haven't got it. I think it should emanate from the Children's Bureau and of course the medical profession. We have not the set-up, and that is the one big thing that should be done so that we are prepared. And then of course we cannot do anything unless we have money, but it doesn't take a great deal of money and we are bound to save mothers of this land.

Could we not get this conference to decide on something, with the medical profession? I see Dr. Bierring is here. He is a very fine man to call in to work on such a committee. You have a challenge here, and there isn't any reason in the world why it can't emanate from this conference and save the lives of the mothers.

The Chairman. I think perhaps we are getting a little nearer the question. Are we too professional or are we afraid of hurting the feelings of our public if we say definitely that the public does not know as much as it should of this problem? Would you as a professional group say that the public is pretty ignorant about this problem? You are at least bold enough to nod your heads, and will you nod your heads if you think the public is uninformed about the problem? (General agreement.)

Thank you. I wouldn't have dreamed any of you thought it from what you said when you got up, although I begged you to say that we as a public, for two reasons, are uninformed.

One reason is our own lack of public response to what should be an intimate and important matter in every family. It is a sort of laziness on the part of the public.

The other reason is that you as professional, administrative groups have not interrupted your work of trying to make conditions better—perhaps you thought you could not—to inform us and to stimulate us. You see, we don't grow up knowing this. Most of you spent many years in an institution of learning to get this information; many more years in a hard, hard school of actual practice before you knew it. Here is your public that has neither of those advantages, and yet it is tremendously important that your program be accepted by the public. Is that true? You can't go any faster than your public will let you.

I think now we might come to the second question: How can public awareness be stimulated? It has to be stimulated by the people who know the program and the problem, and you are those people. How can public awareness be stimulated by those who know?

This is not a challenge in the sense of "I dare you to tell me." Instead, it is a question that has in it a great deal of earnestness, because we as lay people are begging you to tell us how you intend to do this. Unless you do, we won't be able to cooperate with you.

Is there anyone here who has an idea of how it can be done?

Mrs. Sidonie M. Gruenberg (Child Study Association of America, New York City). I am speaking as a lay person, too. I wonder whether the radio has been used to the fullest extent in making the public aware of the situation regarding maternity care in this country, and also of the sources of aid that the various institutions offer. It seems to me that we haven't scratched the surface of the possibilities of reaching out, of having that voice go right into the home.

I should like to see such a program developed in more constructive aspects, not emphasizing fear of death, fear of calamity to mother or child, but on a basis of casual and persistent contact all through the lives of the family.

I have in mind a visit I made in London to a place called the Pioneer Health Center. Some of you may have visited it, too. It is in a working district of London. Two physicians with vision established that center, and it is a health center in every sense of the word. The center is built for the whole family, and some four-hundred-and-odd working families subscribe to the service. It has a nursery school. The real center of it is a large swimming pool. It is in a modern building, almost all glass, and the vision of that building seems to me the vision of the future. Perhaps centers like that may be spread through all the country and all the world, centers where families can gather, where they really feel they have a place to go together.

In the nursery school, for instance, the mother who comes and parks her child doesn't do so with a sense of guilt. They tell her, "Certainly you may leave your child here, and you go and use the other facilities of the building." She has the advice of physicians all through her pregnancy, at the birth and after the birth, and all through the life of the child, in a helpful, joyous spirit of establishing the family rather than in fear of calamity and illness. And so it seems to me that the most constructive way is to build health centers rather than just preventive centers.

That may be a point beyond the one we are considering, but I think our vision should extend toward that.

The CHAIRMAN. That suggestion is very up to date and very usable, undoubtedly, that if you wish the public to know more of this problem and to be aware of the sources of help in solving it, there are methods that can be used, and radio is named as one.

Can anyone here who represents some medical school or educational institution tell us if those who are professionally aware have made a definite attempt to inform the public about this? I do not mean giving information to your immediate public, the mothers and babies who need the attention at the moment, but giving long-time information to people before they need it—information that may be drawn upon by everyone, becoming a part of public information. Is there any such attempt on the part of the schools?

Dr. C. O. MCCORMICK (Indiana University School of Medicine, Indianapolis). I am one of the few who believe that the public is inadequately informed about this subject of maternal mortality and maternal loss. I believe also that one physician in a hundred is sufficiently informed. Very few physicians know what the mortality really is, and I believe this problem of maternal mortality will never be solved until every layman knows what constitutes adequate prenatal, delivery, and postnatal care. When the laymen do know that, then your problem will be solved.

As a suggestion or two that may line up with the suggestion about the use of the radio, I should like to mention one or two things we are doing in our community to give information to the public.

A few years ago the Marion County Medical Association hit upon the idea of going to the county clerk and having him distribute with each marriage license that he issued, a pamphlet stressing the importance of premarital examination and prenatal care and showing the undermining influences of abortion. In that pamphlet are given figures that apply to maternal mortality in the general population of the community during the preceding 10 years, that mortality being 1 in 138 women. In contrast to that is cited the maternal mortality in the university clinic, 1 in 840 women; also at the institution for the care of unmarried mothers, in which no mothers had died among more than 600 cases cared for, from the same community.

We have to meet the problem squarely, and let's do it. Let's begin to educate high-school pupils in the importance of good maternal care. I believe the subject should be included in the high-school curriculum, particularly in the senior year, and it should cover not only the physiology of pregnancy but some idea of the gross pathology. Let's annex that, if you wish, to this course of so-called sex hygiene and let that be the goal of the course. Let us thereby stimulate our high-school students to live for healthy parenthood.

I believe these are two direct methods we have of getting the message across to the public, and that is where the solution of the problem of maternal loss will be found.

Miss HAZEL CORBIN (Maternity Center Association, New York City). For 5 years now we have been carrying on a Nation-wide campaign of education to teach people the need for adequate maternal care. I think the time has come that we don't need to teach the public about gross mortality rates. They don't understand them. I think it doesn't make much impression to tell them 14,000 women die. I think they are much more concerned when they know one woman died of a preventable cause.

The thing we need to emphasize and the thing that hasn't been emphasized by us nearly enough, is exactly what, in simplest terms, is safe maternity care. Exactly what should a woman expect from her doctor? She should expect this, that, and the other thing. We should list them, and we should be courageous enough to say, "If you are not getting that, you are not getting the best care medical science has to offer."

We should tell her, "This is a good hospital. A good hospital includes such as this." We know what hospitals they are. The American College of Surgeons lists them but does not make the list available to every man and woman in the country. We should say, "If the hospital you have chosen does not have these facilities, it probably is not a safe hospital."

We should do the same about nursing service and reduce our teaching of the public to terms they understand and not talk in broad, general terms about mortality and the essentials of safe maternity care, which mean nothing to the average Mr. and Mrs.

The Chairman. That is very definite and concrete and the expression of what we really want to get over to the public, to be vital and moving.

Has someone else a contribution—something you know of that is being done or something you are doing?

Dr. Robert E. Seibels (committee on maternal welfare, South Carolina Medical Association, Columbia). We have a program that is being carried out now and has been for the past several years. To begin with, we investigate every maternal death reported to the bureau of vital statistics. A questionnaire is sent to the county, and a nurse from the county health unit goes to the doctor who signed the certificate and discusses the case with him and fills out the background of that case, as to why the mother died, how much prenatal care she had, whether it was made available to her, or why she didn't get it. The nurse then goes to the family and friends and tries to fill in additional facts.

We feel that this questionnaire method has a definite purpose. First of all, it gives the physician in the rural community the idea that there is someone back of him who is going to question him when he gets into difficulty and doesn't come out of it so well. We try to do it tactfully, but we do give him the idea that somebody is going to ask him why it is that he has had three patients with puerperal hemorrhages or five patients dying of toxemia, and why none of the women with hemorrhages were given transfusions.

Occasionally the physician rather objects to the questionnaire, and then the nurse is instructed not to go further with it but to send it back to me. I take the matter up by letter and explain what we are trying to get at—that we aren't criticizing him, we are trying to be helpful, and the only way we can help him in his community is to find what his difficulty is and try to solve the difficulty in that community.

We also feel it is educational to patients and their friends when we say to the husband: "Did your wife go down to the doctor? Did he examine her urine? Did he weigh her? Did he write down what he found on a piece of paper? The next time anyone you know is pregnant, tell her to go every 3 weeks and have the doctor put down

on a piece of paper what he finds." In that way we get the word out to people in rural districts who are very hard to reach.

We are just completing a series of broadcasts on maternal and infant welfare through the courtesy of the station in Columbia, which covers about 70 percent of the area of the State. The script for this series was lent to us by the committee on maternal and child health of the North Dakota State Medical Association, which began it 2 years ago and carried on a number of broadcasts throughout North Dakota. We get away from any criticism of the individual by using nonpracticing physicians. For instance, the director of the maternal and child-welfare division of the South Carolina Board of Health made the broadcast, so there can be no criticism that a doctor is advertising.

Then the third thing, and one of the most useful things to us, has been the cooperation of the Federation of Women's Clubs and the Council for the Common Good. We have prepared a little pamphlet on "What Is Prenatal Care? Why Is It Necessary?", trying to put into words that the layman can understand just what we mean by prenatal care. What we have tried to do—and the women have certainly cooperated with us—is to get each of the units of these organizations, like the little local unit of the 4–H club in one place and the farm women's group in another, to have one meeting every year devoted to the subject of maternal welfare, at which this pamphlet is read by somebody who has had it explained to her so that she can explain any point that may come up. In that way we try to get to the ultimate consumers the message they should have. In other ways we are trying to reach the medical profession so that when the patient comes to the physician he can give her the proper care.

Mrs. Ruth Mathebat (American Legion, Alameda, Calif.). Obviously, the thing we want to do is to educate the public. We have agreed that the public does not know enough about this important subject. We recognize the fact, too, that we haven't enough funds to reach into every community.

I have noticed on the list of representatives here many from large lay organizations. They have sent representatives here because their organizations are interested in this problem. We have members all over the United States, in every large city, in every small city, in every hamlet in this country of ours. Let's use those organizations. The ones that are here gaining knowledge can pass it on through the channels of various groups in every community, and we can reach the persons that we want to reach in a very practical way. Most of us belong to national organizations that are interested in child welfare, in caring for mothers, because we realize that is the worth-while thing in this country of ours.

The American Legion has a child-welfare division, with a director, and it has been distributing literature on this subject from its headquarters for the past few years. From the letters it has received from urban communities and from great cities the members of the staff realize fully that this subject needs a great deal of time and thought from the American people themselves.

Representatives of these organizations have come here, and we have all learned a great many things. We intend to learn a great many more tomorrow. Then if we will go back with the knowledge

we have gained to those organizations that sent us here, and put what we know into practice, we can go a long way toward explaining to the public this maternal and child-health program. As the layman sees it, it is one we haven't been willing to talk about in public. We haven't been able to face it fairly and squarely, but we realize now that with the statistics as they are the time has come when we must face the issue; we must stand up and talk to all groups and not have any qualms about doing it. We have left it to the members of the medical profession, assuming they knew all about it. That day is past. It is up to each one of us. It is the duty of every citizen of this country to teach his neighbors the things they don't know. Tell them where they can get help at a critical time and see that the baby gets the proper start in life. It is up to our organizations. Let's use them.

The CHAIRMAN. I should like to have a brief summary made, and now you will see why I asked these four consultants to come up here. I am going to ask Dr. Lillian Smith, director, bureau of child hygiene and public-health nursing, Michigan State Department of Health, to summarize the answers that have been made either to this question or to other things that were raised as we considered the question.

Dr. LILLIAN R. SMITH (State Department of Health, Lansing, Mich.). It is evident from the discussion that the need is generally recognized of stimulating public interest in maternal and child health. A number of methods of stimulating the public interest have been mentioned and there are others worthy of our consideration.

From the floor there has been discussed the use of the radio, health centers, education of physicians and lay groups, education of the public as to what constitutes safe maternal care, investigation of maternal deaths, and informing the public as to the causes of maternal deaths and the hazards of pregnancy and childbirth. Mention has also been made of informing the public through lay organizations.

I believe we might enlarge somewhat on this use of lay organizations. We feel that information may be spread through developing leaders in lay organizations and then having the leaders take to the members of their groups the information which they have obtained from professional groups.

In the discussion I have noticed a gap in the age groups mentioned with reference to health education. Mention has been made of education of the prospective mother and education of high-school students. Should we not have a continuing program of health education on the care of mothers and children from childhood through high school and college and from there to premarital education and the education of prospective mothers and mothers of young children?

The use of magazines as a means of stimulating public interest has not been mentioned, but magazines are being used extensively these days as a means of education and many popular magazines publish authentic articles on maternal health as well as other phases of public health.

One reason why our material has not been as effective as we wish is that it is not vivid enough. We need more graphic material. We need more striking posters, and I cannot refrain from mentioning our own film on prenatal care which was prepared at Harper Hospital,

Detroit, under the direction of Dr. Ward Seeley, of the maternal-health committee of the Michigan State Medical Society. This film on prenatal care has been given to many lay groups through the State; in fact, we have five films in constant use and are also being asked for them in other States.

We certainly should use every possible avenue for getting this information to the public and making it as vivid and interesting as possible.

The CHAIRMAN. Thank you for the summary, Dr. Smith. And now let's proceed to the third question—which is so nearly like the second question that I don't wonder there was confusion—and consider what methods of coordinating citizen, professional, and official effort are most practicable. We shall be glad, Dr. Matthews, to hear your contribution.

Dr. HARVEY B. MATTHEWS (committee on maternal health, New York World's Fair). I represent the maternal-health committee of the New York World's Fair. The plan we have in mind is purely educational for the laymen. We do not propose to try to educate the doctors. There are other places where we think they can be educated better.

In planning this exhibit on maternal health for the world's fair, we have planned it and expect to build it around the following items: (1) Premarital and marital. (2) Prenatal care and all its ramifications. (3) Pregnancy. For pregnancy we think we can use illustrations, pictures, drawings, models, using the three-dimensional scheme. We can show how pregnancy begins and how it progresses, which we believe will do a great deal to educate the public in the processes that take place within the body, within the uterus, during pregnancy. (4) Labor. By the same method we think we can show the public how delivery should be conducted. (5) The postpartum period. It seemed to us the postpartum period has not been stressed to the public. It should be, and we think that this is a good time to tell the public more about the postpartum period. (6) The follow-up. In planning how we could put on an exhibit for the layman during the World's Fair I asked everybody I met what to show, and every nurse and social-service worker that I asked said, "Tell them something about the follow-up, and don't forget the husband." So we are going to have a little exhibit showing what the husband should do during the follow-up period or rather what he should not do.

We think that will be a marvelous way of spreading the news before the public, because officials estimate that 50,000,000 people will walk through the World's Fair. There will be 300,000 a day, and on some days 800,000; so it seems to me this is one way that the public will be informed about our subject.

Dr. I. A. SIEGEL (American Legion, Baltimore, Md.). I rise to suggest a practical method of coordinating civic and professional efforts. Two years ago the American Legion established in Maryland a committee known as the maternal-hygiene committee, of which I am chairman. I regret that this effort at coordination came through a lay group. However, we undertook to conduct a professional campaign on the subject of maternity hygiene in all its phases, first obtaining the cooperation of professional groups, the Health Department of the State of Maryland, and the Baltimore City Health

Department. We also communicated with the Maryland Medical and Chirurgical Faculty, explaining to them what our purposes were in this matter, and they did not object. We likewise communicated with the president of every county medical society, acquainting them with our purposes and explaining that it was purely an educational effort on our part, and they did not object. In that way we got the support of the entire medical profession in Maryland.

In addition to that we had brought in, through the American Legion, the cooperation of the various units and posts in the State in this fashion: It was their job in their particular communities to organize one meeting on the subject of maternity hygiene. We held these meetings through the help of the State committee, which was made up of members of the American Legion, and with the cooperation of the State and city health departments, as well as the Children's Bureau, which furnished us with a motion-picture film and literature on the subject. Medical men who were trained in obstetrics and who were connected with the universities, both Johns Hopkins and the University of Maryland, spoke on various phases of maternal hygiene. In addition to that, we showed illustrative motion pictures and distributed pamphlets on the subject of prenatal care. The pamphlets were furnished by the Health Department of the State of Maryland and gave the facts, illustrating prenatal care and how it may be obtained.

In addition, we had a series of radio talks, first presenting the whole problem of prenatal care, the present status of maternal mortality, and the causes of maternal mortality. The series included talks on complications, on diet, on toxemia, and there was a talk on the importance of the father in the matter of maternal hygiene.

I think such coordination can be had in every State, and both the professional group and the citizens as a whole can be brought together. Parent-teacher associations and other lay groups would be interested in having a meeting at which the matter of prenatal care in all its phases can be brought to their attention.

I believe that is probably a better way than having the campaign come from one group, because if it comes from the professional group alone, the public may feel that the members of the profession are trying to boost their own practice, but if it comes from a mixed group in which the profession is interested, the lay group is interested, the health authorities are interested, then the public will know that it is a concerted effort on the part of all forces and that everyone is interested in the welfare of the community and not just his individual welfare.

Dr. ARTHUR W. BINGHAM (chairman, committee on maternal welfare of the Medical Society of New Jersey, East Orange). On account of the good results obtained by the Essex County Maternal Welfare Commission, organized in 1923, the Medical Society of New Jersey appointed a committee on maternal welfare in 1931 to direct similar work in each county. Maternal-welfare committees were gradually organized in every county.

Education and prevention are the main features of the work. Suggestions were made by the State committee regarding prenatal, delivery, and postpartum care, to be carried out by the county committees.

Prenatal centers were recommended, field nurses being used in conjunction with the centers. Private physicians can also use the field nurses to supplement the mother's visits to the office where distances are great. The improvement of hospital facilities and a higher standard of obstetrics in home deliveries were recommended. The place to handle an obstetric case safely and efficiently is in a first-class obstetric hospital unit.

The committee on maternal welfare of New Jersey believes the maternity department of a hospital should be an isolated unit, with a separate staff of obstetricians when possible. There should be a large "courtesy" staff of general practitioners who may attend cases under the supervision of the regular staff, rules for consultations in abnormal cases being plainly posted. In this way the general practitioners are able to work under better conditions and receive a practical demonstration of how to handle abnormal cases. There should be regular staff conferences open to all interested in obstetrics.

Interest in the work increased and some counties showed great progress. A few counties were slow in starting. Gradually results began to show, and the maternal mortality rate dropped from 5.9 per 1,000 live births in 1931, when the work began, to 3.7 in 1936.

Statistics have been published showing how each county stands regarding the maternal death rate from various causes. The work has brought about a realization of the need for better obstetrics, and the physicians are raising their standards. A maternal-welfare article is published each month in the New Jersey State Medical Journal.

The study of death certificates has been very instructive. The certificates show errors of judgment and errors in technique, as well as lack of cooperation on the part of the patient. We should keep constantly before us the motto, "More care in handling normal cases; more and earlier consultations in abnormal cases."

In March 1936 the State medical society and the State department of health joined forces to carry on a more intensive campaign for maternal and child health. Sixteen field physicians were appointed to work throughout the State. They were paid by the bureau of maternal and child health of the State department of health from funds received under the Social Security Act. At the same time a course of 100 lectures was given all over the State by members of the State medical society. Literature was prepared by the committee on maternal welfare of the State medical society and printed and distributed by the bureau of maternal and child health.

In rallying the physicians to practice better obstetrics, we feel that it is of great advantage to the department of health to have the active cooperation of the State medical society and also that it aids the work of the State medical society to have the cooperation of the State department of health. The chairman of the committee on maternal welfare of the State medical society is chief advisory obstetrician to the bureau of maternal and child health.

In the fall of 1937 the number of field physicians was increased to 22, 1 for each county and 1 for special work among colored physicians. The names of the field physicians and the counties they serve are now printed each month in the New Jersey State Medical Journal.

The field physicians are appointed in the following manner: Each

county medical society nominates three to five men and from these a special committee of the State medical society selects one from each county and recommends him to the State department of health for appointment. The committee for the State medical society is composed of the president-elect of the society, the chairman of the welfare committee, the chairman of the public-health committee, the chairman of the maternal-welfare committee, the director of the bureau of maternal and child health.

The field physician is the contact man between the State and county maternal-welfare committees, the State department of health, and the physicians of the county. His function is to stimulate among physicians in his county interest in and familiarity with modern educational and preventive maternal-welfare and child-health practices. His work has two divisions: (1) Maternal welfare and (2) child health.

(1) *Maternal welfare.*—The field physician calls on physicians in the county and distributes literature, which includes prenatal cards and standard procedures for prenatal, delivery, and postnatal care, as well as rules and directions to be given by the physicians to their patients.

He urges the use of modern equipment. He also investigates prenatal centers already in operation in the county, as well as the need for more prenatal centers. He helps to arrange obstetric conferences and explains the refresher courses that are being given at Margaret Hague Maternity Hospital, Jersey City.

He urges consultations in abnormal cases and explains how to get a consultant for a patient in the low-wage group, the consultant to be paid by the State department of health. Any competent consultant may be selected. By giving the family physician free choice of consultant, he shares in the responsibility for improving maternity care and is more likely to cooperate. The field physician provides the slips to be filled out by the attending physician and the consultant. There have been over 125 consultations since May 1936. Midwives may also use this service. These slips are all checked by the chairman of the committee on maternal welfare.

The field physician explains how to get a nurse for delivery service in the home for a patient in a low-wage group, the nurse being paid by the State department of health. He provides the slips to be filled out in each case. Any registered nurse may be called. The assistance of a nurse at the delivery or to a consultant in an abnormal case is of real value to the patient and the physician. Over 1,500 patients have used this nursing-delivery service since May 1936. The nursing slips are all checked by the assistant supervisor of delivery service.

The field physician investigates every maternal death in his county, reporting findings to the chairman of the State committee on maternal welfare. This is done not for criticism but for more accurate diagnosis and classification and for discussion in obstetric conferences. He investigates all hospitals taking obstetric cases and gets an annual report from each. He urges them to adopt the rules suggested by the State committee on maternal welfare and to isolate obstetric patients from others.

(2) *Child health.*—The field physician helps doctors to familiarize themselves with methods and procedures through attendance at lec-

ture courses and at baby clinics, through pamphlets and books, refresher courses, and pediatric conferences. He helps physicians to be prepared to keep records, immunize children, examine and weigh well babies, arrange for monthly office visits, and educate mothers in the care, feeding, and management of children.

Meetings are held monthly with the field physicians, and semiannually there is a meeting of all the county maternal-welfare committees with the State committee. The field physician attends all meetings of maternal and child-health committees as well as of the county medical society. He does everything possible to assist in reaching our goal, which is adequate supervision and care for every expectant mother and every child in New Jersey.

Instead of lectures this year we are holding obstetric conferences in each county. A few of the counties have had such conferences for the past 2 or 3 years. The purpose is to discuss the deaths and difficult cases that have occurred and from time to time to have a physician from outside the county lead the discussion. A number of obstetricians have agreed to lead these discussions when requested, and it is hoped that more counties will avail themselves soon of this opportunity.

The chairman has attended several of these conferences and has future engagements for others. On these occasions the discussion has been on facts brought out by death certificates with emphasis on what not to do.

Regarding our record for 1937: Although one county has had several more deaths than in 1936, most of the counties have had fewer than in 1936, so that the total will probably be a little better than in 1936, when it was 3.7 per 1,000 live births.

The improvement in the standard of maternal care in New Jersey as shown by these statistics is largely due to the excellent cooperation of the physicians throughout the State, without which we cannot succeed.

In closing, allow me to quote some statistics from the Orange Memorial Hospital, Orange, a typical community hospital. In 1937, 1,117 mothers were delivered by 98 different physicians and 120 abortions were treated, with no maternal deaths. No patient was refused admission. No ward patient has died in 2 years. Part of the credit for this record is due to the Maternity Center of the Oranges and Maplewood, whose excellent system of prenatal care prevents many complications.

The CHAIRMAN. That is an extremely interesting program. It makes us wonder why the whole problem has not been solved, when we know of such effort as this and realize the success here and there. We are convinced that what has been done and is being done can be duplicated.

Mrs. DORA H. STOCKMAN (National Grange, East Lansing, Mich.). I represent the National Grange, about 1,000,000 farmers of the United States. I am just wondering if we would not go much faster if we asked, in a democratic way, these groups that are interested to develop some of the ways to get these ideas across. Already they are volunteering to do this work, and I am sure Miss Lenroot has found that all these groups, like the National Grange, the

American Farm Bureau Federation, the American Legion, the General Federation of Women's Clubs, are most eager to carry out the program. We think—and I believe I am expressing the point of view of thousands of lay people—that we could share in this, and if we took hold hand-in-hand we could go a long way.

We have the science and the knowledge, we all admit. We haven't enough people nor enough money to do the job, we think, but we could have if we all wanted it very much. Just now in America there is a vital group of thousands of young people between the ages of 17 and 21 who have no jobs and who do need to know something about this. If we select young people in the National Youth Administration and in high schools and other groups, and let them know about this, we are going to carry the story forward. They are the ones who are going to do this work, because, despite all the other facts, we must have the cooperation of these young people.

I remember a number of years ago when my youngest son was a small boy, we were going down to the barn one night to feed the sheep. The boy was following behind and I was carrying the lantern. Finally he suggested, "Mother, if you let me help carry the lantern, we could both see better, couldn't we?"

I think that one fundamental thing in getting these scientific facts and these problems across is to ask in a democratic way: "How do you think it can be done, and how shall we do it?" I think that is the fundamental thing that Miss Lenroot is doing in bringing these many groups together. We all want the same thing, and if we can all take hold of this lantern, I am sure that we can make more progress in the next 5 years than we have in the past 25.

The CHAIRMAN. I am sure at least one of the answers to Mrs. Stockman's question will come out of this conference. How can professional and administrative groups cooperate more effectively with the public? Dr. Chadwick, of Massachusetts, our other consultant on this end of the platform, will summarize the answers to this question, if there have been any, and give us a bit of his thinking on this third question.

Dr. HENRY D. CHADWICK (Massachusetts Department of Public Health, Boston). We have had several methods proposed here this evening, which it seems to me would be very effective. First, spreading information as regards what is proper maternal hygiene through services extended by various large groups, such as the American Legion, the American Farm Bureau Federation, the National Grange, the General Federation of Women's Clubs, and others.

A method by which such information could be brought to the people would be similar to that which we are using in Massachusetts in our cooperative committees on cancer. We have in every city and town, or will have in the course of another year, cooperative committees made up of representatives of various organizations, service clubs, religious groups, and others in that community, one representative on each committee. It is the duty of this member to have a talk given by local physicians to her own group or club on the subject of cancer.

The same thing could be done for maternal hygiene, and we have found it much more effective to have these talks given by local physicians to small groups, 12, 15, or 25 persons, rather than to attempt to get a large meeting in which the discussion has to be in the form

of a lecture. With a smaller group, it is more in the nature of a round-table discussion, in which questions may be asked and the answers given.

We come down, I think, to the method that we have been talking about tonight; that is, action through the medical societies, as they have been doing in New Jersey. In Massachusetts we are carrying on a study of maternal deaths in cooperation with the health department and the Massachusetts Medical Society. Each death certificate is studied to find out whether death was due to some puerperal cause. If so, it is sent to a committee of the obstetric society. We have appointed obstetricians in different areas of the State and, when a death occurs from a puerperal cause, the death is reported to the obstetrician in that area, and he in turn goes and discusses the problem with the physician in charge of the case and fills out a rather comprehensive questionnaire as to what happened. That questionnaire is referred to the committee of the obstetric society for review and discussion to determine what was done that should not have been done, or where the mistake was made, if any. That serves a very useful purpose in that it gives the physicians of the State a knowledge that these maternal deaths are being studied, and the individual in charge of a particular case has the benefit of the postmortem discussion with the obstetrician.

Then we are giving postgraduate courses in obstetrics and pediatrics to the different county societies, and we should like to provide consultation service for the patients who are cared for in the home. Nearly 70 percent of the deliveries are in hospitals in Massachusetts, but for the other 30 percent we should like to furnish consultant service where it is needed and also see that delivery-nursing service is provided where it is needed.

The CHAIRMAN. We have considered the three questions and summarized the questions as we went along. To what extent is the public aware of the problem? Not nearly to so great an extent as we would wish if it is to be solved.

How can public awareness be stimulated? By constant contact between you professional people and lay groups wherever you meet them, and by making occasions to meet them.

What methods of coordinating citizen, professional, and official effort are most practical? We have had two illustrations given, one from the American Legion attempt in Maryland; the other from the work that has been done in New Jersey. We have also had something specific about another State, Massachusetts.

In the findings that come into our hands more than one way of coordinating the efforts of the three groups will be discoverable as we read these presentations. It is a very hopeful and optimistic outlook for proper cooperation among the three types of individuals interested. I am sure that you, as professional people, agree that your program cannot move forward effectively, happily, the way you want it to, any faster than your public is made aware of what you are doing and is placed in the position where it understands and is willing to support your work. I am sure that is what we should like to have come out of this conference, because, as was stated here, we represent hundreds of thousands, even millions, of people who are not aware of all the facts but are ready to cooperate.

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Now for our fourth question, as to how the fine things that come out of this conference may be continued, if it is desired that they be continued. I am going to ask Miss Lenroot to say a word on that.

Miss LENROOT. Madam Chairman, I think the forum this evening has been a very practical demonstration of the value of providing means for exchange of information and experience. If all of you could have had the opportunity of attending the meeting of the committee on resources of citizens' groups, you would have found there information which, when added to this discussion, would have given a very interesting picture of what is being done, nationally and locally, as far as it could be brought together in the very limited time available this evening.

The committee on resources of citizens' groups, in the report that will be submitted to the conference tomorrow afternoon, will make certain suggestions for continuing an interchange of information and experience, a means by which steps may be taken as experience demonstrates the need for taking such steps without in any way committing any organization or any individual to any program at this time. You will have before you tomorrow for consideration and information and action—because that will be a type of thing that the conference itself must act upon—a definite resolution from the committee. Without asking you to consider how this may be formulated, I should like, Madam Chairman, to have very quickly some indication of whether the people in this room believe that a means should be provided for continuing this work.

The CHAIRMAN. I think that is a question that we might almost answer as we did the first question. How many of you feel that the gathering together of many delegates from all over the country has meant that we are starting something that should be continued in some form?

(Hands of the majority were raised.)

Mr. GUY I. BURCH (American Eugenics Society, Arlington, Va.). I think that to some of us it would depend upon the scope of the program, whether it included all types of factors that influence maternal and child mortality.

The CHAIRMAN. Would you like to widen the scope of the program?

Mr. BURCH. If the restrictions were lifted. For instance, this morning we saw that one group, say, the group interested in birth control, was left out, and I think if all those factors were considered, more of us would be more inclined to go along.

The CHAIRMAN. When the proposition is brought before us, we can react to it.

Do the educators, and of course you people all fall in that group, think that the findings of this conference should be implemented for future use? That is the question we want answered, and the manner of implement that it shall be will be a part of our privilege to decide as these matters are brought to us tomorrow.

May I, in closing, say one very serious word to you. I think the generosity of individuals who are called upon suddenly to make a

contribution to a program should be commended, and in all earnestness and with great appreciation I want to mention the fact that Dr. Chesley, of Minnesota; Dr. Smith, of Michigan; Miss Fish, of Washington, D. C.; and Dr. Chadwick, of Massachusetts, came to the platform to help me with my discussion this evening and to give you the pleasure of listening to their contribution. We all sincerely thank them, and I am sure you will thank them with applause. [Applause.]

(Meeting adjourned.)

Tuesday, January 18—Morning Session

Katharine F. Lenroot, presiding

The CHAIRMAN. I wish to express my very deep gratitude, in which I am sure every member of the conference shares, for the kindness of Mrs. Roosevelt in making it possible for us to have this meeting at the White House. It is unnecessary for me to say anything about the service that Mrs. Roosevelt is constantly giving in all matters bearing upon the welfare of mothers and children and the family. She is untiring in her interest and her efforts; she never fails to respond to any call that is made upon her within the maximum possibilities of her marvelous resources of spirit, energy, and intelligence.

She has manifested throughout the weeks of preparation for this conference a very great personal interest in it. Some weeks ago she invited Dr. Eliot and me to be present at her press conference and gave practically the whole hour to discussing with the women of the press the purpose and objectives of the conference.

Yesterday Mrs. Roosevelt talked with me over the telephone and said that the death of a very dear friend made it impossible for her to be here this morning. However, I know we all feel her presence in spirit here with us, and she has asked me to report to her personally the deliberations of the conference. I shall at that time, of course, express to her your gratitude for her hospitality and your appreciation of her interest in our problem.

Mrs. Roosevelt has asked Mrs. Warren Delano Robbins to represent her on this occasion as hostess for her, and to bring to you her greetings and her message of welcome.

Mrs. ROBBINS. Mrs. Roosevelt asked me to tell you how very sorry she was not to be with you this morning, and to welcome you all to the White House.

The CHAIRMAN. We shall have the great pleasure of having Mr. James Roosevelt speak now.

Mr. ROOSEVELT. I think you know that I am privileged to be here with you simply because I am in the position of substitute for my mother. She wanted me to come particularly to tell you how she missed the opportunity of being with you, and, as you know, except for a very sad occasion she would be here.

I have only one bone to pick with her. When she left, she asked me to come and she presented the invitation very properly, but she did not give me the remarks I was supposed to address on her behalf. So entirely personally may I say what I feel all of you must know—that we who are a part of the controversial side of government have a tremendous interest in and sympathy with the unanimously supported work you people are doing. After all, while you are animated by humanitarian purposes, to the rest of us you add something a little more significant.

It may seem in these days when the newspapers are full of the questions of national defense as they refer to the necessity for rearmament and the building of armies and navies and things of that kind, that perhaps the most important part is often overlooked, and that is the part that you are doing; for the best national defense that we can have is proper children growing up under the proper kind of care. I feel that those who really study the problem know that we shall be regarded by the nations of the world as an intelligent nation, worthy of complete respect, if our children and their mothers are so outstandingly fine that we can say without any question that we exemplify the true heights that civilization can reach.

Before I leave I want once again to say that I hope you will all be happy here in Washington and feel that all of us, though you may not see many of us working in the various departments of the Government, are behind Miss Lenroot and the wonderful work she is doing and that we appreciate the inspiration all of you bring to us here in Washington.

Thank you very much.

The CHAIRMAN. Mr. Roosevelt, we are deeply grateful for this message and hope that you will convey to your mother, as I shall have the privilege of doing also, our deep gratitude for the opportunity of meeting in the East Room and having the inspiration of knowing that you and your mother and the President are as one with us in the desire to solve some of these very serious problems confronting mothers and children.

Mr. James Roosevelt himself has always been a most consistent friend. I have not hesitated to call on him from time to time for advice and counsel, and he has always responded most cordially and helpfully.

We reviewed yesterday what constitutes good care for mothers and babies and what is involved in extending good care to all mothers and babies. Before those reviews, we had the very comprehensive and stimulating analysis, by the Surgeon General of the United States Public Health Service, of the relation of a program of care for mothers and babies to the health needs of all the people and the responsibility of the public for adequate health care.

Today we are to have illustrations of encouraging experiences. I think some of us yesterday perhaps felt somewhat oppressed by the darkness of the picture that was presented to us, but today we are going to give you some high lights of efforts that have been attended with success, that point the way toward making more universal the methods that have been successfully used.

We have, therefore, planned a symposium under the leadership of the Assistant Chief of the Children's Bureau, Dr. Martha M. Eliot.

SYMPOSIUM: WHAT IS BEING DONE TODAY? WHAT CAN BE DONE TOMORROW?

Martha M. Eliot, M. D., Assistant Chief, Children's Bureau, United States Department of Labor, Leader

The CHAIRMAN. I am not going to take very long this morning to introduce the symposium that you are to hear very shortly. I do want, however, to pick up the discussion where it was left yesterday. Though the general situation certainly requires action on the part of people who are interested in doing something about these problems that we have been discovering, nevertheless, I think that we should realize that many constructive efforts have already been made in this field. Many private, as well as public, agencies have made notable advances along these lines, advances that have given us the basis for procedure. They have, in fact, given us the inspiration to go ahead and do something about this program for women and their babies all over the country.

The advances that have been made by these special groups, working in the field, have shown us the way through programs of action that are of the greatest help now in planning for the future, and in developing methods. They have helped us in developing the standards that have been established for this type of care.

It would be utterly impossible for me to mention all the groups that have been involved in pioneer work in this field. I still speak of it as pioneer, because after yesterday's program I think it must seem pioneer to all of us. There are, of course, the many efforts on the part of medical societies to study the procedure, the work, and the results of work in their own communities, from which we have learned many facts with regard to how we should go ahead in this program—not only facts with regard to mortality and morbidity, but also procedure. I should like to refer to some of the special studies that have been made, but before the morning is over you are going to hear something more about the special studies made by medical organizations in the evaluation of their own programs. I should like to note especially an interesting piece of work in the field of maternity care that has been done through the medical society in cooperation with the State Health Department of New Jersey. Those of you who were at the forum last evening heard it described.

Then there are the pioneer undertakings that have to do with getting information over to the public, such as that of the Maternity Center in New York City. There are pioneer jobs of working out practical programs in cities, such as that in New Orleans, a small project but one that shows great possibilities. You will hear later about another in one of our large cities. I could mention others, but there is not time.

Then there are the tremendous advances that have been made through the work of the maternity hospitals and those sections of general hospitals that have been devoted primarily to maternity care. There are the great advances that have been made in the care of newborn babies in many of our large hospitals and in connection with many of our medical schools. There are, too, the advances that have been made in medical science and medical education. Even greater advances will be made in the future in each of these fields.

So far the agencies to which I have referred have largely been those operated by voluntary groups. The public agencies, too, have made tremendous strides in this work for maternity and infancy, starting many years ago and continuing to the present time, when through State, city, and county endeavor, so much is being done in the field of maternal and child health.

Yesterday a great deal was said about the rural areas. I think that we should not forget that there are grave needs in the cities. The cities, however, probably have done more to show us the way than have the rural areas, because they have had facilities which in many cases the rural areas have not had.

The program this morning is going to give you a picture of a few areas, of a few of the things that are being done. Before we get through I hope that we shall have time to describe briefly how this is affecting the country as a whole because the participants in the symposium this morning will give you but a fragmentary picture of the many things that are happening all over the country. I want you to realize that the work, which will be described by these speakers, is really representative of many scattered undertakings. The work that is being done is good, but by and large as you look over the country as a whole you find that the total amount of work is small. There is much yet to be done to extend it to all the different communities in our country.

This morning again we are going to begin with the rural areas and then go on to the cities. As a matter of fact, I think we are going to hear about some rural and some city work from the first speaker—Dr. B. F. Austin, the director of the bureau of hygiene and nursing of the Alabama Department of Public Health. Dr. Austin has been in the Department of Public Health of Alabama for many years. For 2 years he has been director of this particular bureau. He has taken the most tremendous interest in building up the maternal and child-health services in Alabama, and he will give us a picture of some of the things that are being done there.

Dr. Austin. As an introduction I want to give you the background of our set-up in Alabama. Our organization is such that the State medical association is the State board of health. Each county medical society elects five of its members to act as a county board of health. That makes the State health department and its integral units of county health departments a vital part of our State medical association and our county medical societies, so that all our work in Alabama is being done at the instance of the medical profession of the State. On occasions some physicians have voiced their opposition to some of the things that we have done, but the majority and the leaders are helping and are proposing the programs that we are carrying out.

Today we have in 67 counties—that is, in all our counties—full-time county health services. In each county there is a physician, who is the county health officer, and at least 1 nurse; 32 of the counties have 1 nurse and 23 have 2 nurses each; each of the other counties has 3 or more nurses; 1 county has 4. With such personnel, with whom our State health-department personnel can work and carry forward activities, we are doing some of the things that I am going to enumerate.

Next I would like you to know that on the staff of the bureau of hygiene and nursing of the State health department we have a medical director, an obstetrician, two pediatricians, one of them a Negro physician who has been lent to us by the Children's Bureau and who is doing a magnificent piece of work. According to a telegram received from Dr. Baker this morning, a third pediatrician will be on our staff shortly.

These specialists are on our staff to assist us as county health workers and as State health workers in this field of work. They are also there to assist us in stimulating an interest on the part of the public and particularly of the medical profession in the problem that is before us. They carry on their activities through the county health departments and the county medical societies. When a pediatrician goes into a county he has the backing not only of the county health department and all its personnel, but of the county medical society as well. This special service is being rendered primarily to assist us and the physicians and the public to know and to appreciate the value of the work that we are doing.

As part of our maternal and child-health program we have on our staff an oral-health teacher and a dentist who go throughout the State teaching health workers, teachers, and school children the value and the importance of oral health.

We have five advisory nurses and one nurse-midwife who is an adviser. I will tell you more about her program later.

The program is built around education which is promoted through lectures, personal contacts, group conferences, radio broadcasts, newspaper articles, the distribution of pamphlets, and all that is part of the education program of any health department.

Our prenatal, postnatal, infant, and preschool home visits that are made by the nurses contribute materially, we believe, to the maternal and child-health services that we are giving in the State.

I have been asked particularly this morning to describe to you one feature of our service that was begun after I came into the bureau of hygiene and nursing and since the Social Security Act made it possible for us to have more funds. I am going to describe it as it now is practiced in Jefferson County. Jefferson is the county in which Birmingham, our largest city, is located. There are about 450,000 people in the county. The services are rendered primarily to the people in the rural and the suburban areas. The downtown clinics are operated as heretofore in connection with the local hospitals.

We have 13 health centers in Jefferson County. At these health centers maternal and child-health services are rendered by local physicians. The health centers are manned by these local physicians, county health nurses, and lay people. There is in each health

center a health-center association made up of lay people in the community who are interested in the work. They volunteer their services for clerical help, for assistance to expectant mothers in preparing their layettes and in furnishing loan closets, because, as you know, these are all necessitous cases. They are persons who do not have money to pay a physician, and necessarily a loan closet is organized by the lay organization.

The interesting departure from our ordinary practices in Alabama has been the association that we have with the physicians in Jefferson County. As I said, there is a physician at each of these maternal or child-health clinics—except the dental clinic. The dean of obstetricians in Alabama, Dr. Garber, is consultant to the physician at the clinic. He visits one or more of the clinics every afternoon and is subject to call for consultation at any other time.

We have a like arrangement with a pediatrician who works with the child-health clinics. He is subject to call at any time and works every afternoon at one or more of the clinics.

The physicians are paid the paltry sum of $4 per clinic session. In some of the other counties they are being paid $5 per clinic session that they attend.

As an expansion of that service an obstetrician on our State staff has gone about over the State, has told the doctors what was being done, and has emphasized the importance of this prenatal medical service. Some of the doctors have volunteered to operate a clinic without pay, provided the obstetrician will come and help them in its organization and visit them from time to time. That gives us an opportunity to spread that type of service out into the more rural areas, into the counties where there is no obstetrician and where there is now no chance for consultant service from obstetricians. The pediatrician on our staff gives a like service to doctors and medical societies and county health departments.

I promised you a few words about the midwives. We have, as I told you, a nurse-midwife with a certificate in midwifery who teaches our health workers. About 37 percent of the deliveries in Alabama are attended by midwives. They are not trained midwives. They are ignorant, superstitious, many of them highly superstitious, some of them very slovenly in their personal habits. Therefore, we have a tremendous task on our hands to teach these midwives how to do the things that we want them to do, and particularly not to do the things that we know they should not do. So the nurse-midwife goes about over the State and, with the county health personnel, particularly the health officer and the nurse, organizes midwives into groups where they are taught, by demonstration, by lecture, and by every means at our disposal, the things that we think they should know and put into practice. They are required to get permits each year. Of course, it is needless to say that they are given a physical examination, including a Wassermann test, and in that way we attempt to eliminate the most unfit physically.

It is hard to tell you in 10 minutes all we are doing down there. I am going to take the last 2 minutes to tell you that, as you already know, we are just beginning to get somewhere. We have been doing this for about 17 years and we feel that we are on the way and can emphasize the need for expansion of our services. You

known that with 135 nurses doing public-health work in the field and with 63,000 births a year you can't get much nursing service to the people. You know, too, that with 24,000 deliveries attended by ignorant midwives, we are not getting much medical service to the people who we know need it. We are hopeful that, as we are able as public-health workers to show to the people of Alabama the need for expansion of this service, the need for more public-health nurses, the need for home-nursing service at the time of delivery, the need for medical service prior to, during, and after delivery, and the need for hospital service, we shall be able to provide it. You might be interested to know that less than 2 percent of our deliveries in rural areas occur in the hospital, and that only about 11 percent of all our deliveries occur in the hospital.

Taking all these things into consideration, we can readily see the urgent need for these services. We are going to continue to appeal to our public, to our appropriating bodies, and to the civic and welfare organizations scattered throughout the State, so that we may get sufficient funds.

In answer to the query as to what we are going to do tomorrow, I put a big "if". I cannot say what we are going to do tomorrow until that "if" is answered. If we have sufficient funds we are going to add more home-nursing service at the time of delivery, we are going to add medical service for maternity cases, and we are going to try to stimulate more hospital service for these cases.

The Chairman. I am going to take you now across the country up into the plains of Montana. There the situation, as you can well imagine, is entirely different from the situation in Alabama. Montana has been one of the States that has suffered most severely in recent years from the drought. Many problems arise in Montana that do not arise in other types of States. I am going to ask Dr. Jessie M. Bierman, director of maternal and child health in Montana, to tell us in 10 or 12 minutes some of the things she is trying to do there and some of the things that she would like to do in the future.

Dr. Bierman. Montana has a population a little greater than the city of Washington, distributed over an area of some 146,000 square miles. That is four persons for each square mile. We have plenty of elbow room out there.

The rural population is divided between the eastern plains—the drought area during the last few years—and the mountain valleys of the western section. Thirty-eight percent of the births during 1936 occurred in the drought area. The "baby crop" is the only infallible crop we have had there for a number of years, and we are very thankful that this crop has not failed, for the people living in this area have demonstrated a constitutional hardiness, a degree of courage and fortitude and faith that we need in this country and are going to need in future generations.

Judged by any standard the facilities for maternal and infant care in this section would be considered poor indeed. In a number of these counties 1 physician serves a population of between 2,000 and 3,000 scattered over a large area. Community resources are practically exhausted; there is nothing left to tax; and the major share

of these families are on some form of relief. Yet the maternal mortality in the drought counties in 1936 was 45 compared with 55 in the State as a whole. Whether this is the result of constitutional hardiness, the rigorous climate, or the lack of physicians, I don't know [laughter], but I do know that our maternal mortality is higher in cities, where things look brighter on the surface but where there are more abortions.

But the maternal-mortality figures don't tell everything. They give no hint of maternal morbidity. I wish there were some way of measuring the loss of maternal efficiency in farm mothers whose health has suffered so much from want of medical care. One indication undoubtedly is seen in the infant death rate, which is higher in the rural areas than in the cities.

As far as our maternal and child-health program is concerned, we are pioneering in Montana, I think, in every sense of the word. We have developed our State program with the following facts in mind: Physicians attended 96 percent of the deliveries in 1936—99.6 percent of urban deliveries and nearly 94.7 percent of rural deliveries. Obstetrics is in the hands of the physicians in Montana. Fifty-nine percent of the births occurred in hospitals—91 percent in urban areas, and 44 percent in rural areas. Over twice as many live births occurred in rural areas as in cities. Fifty percent of the rural mothers interviewed had received inadequate antepartum care or none at all. The mothers and doctors alike are responsible for this state of affairs.

The very good highway system in the State makes it possible for people who have cars and can pay the price to reach hospital centers where good care is available, and an increasing number of those who are able are availing themselves of this care. We have competent specialists in the larger towns and cities, and the hospital facilities are good there.

A leading obstetrician tells me that many of his patients drive more than 100 miles regularly for antepartum care. The 30 miles mentioned in some of the papers given at this conference don't seem like anything to us. Distance and county lines mean little. The Federal highway system, with its splendid maintenance service during the winter months, has brought about great improvement in maternal-care facilities in the Western States. In Montana we can see that the money that is spent on roads helps the mothers and babies.

Our problem, then, is confined to the portion of the population that does not know the importance of seeking good care—which requires an educational attack; to the doctors who have stood still as time and progress marched by—more education; and to that considerable portion of our people who haven't the money to buy safe care.

We have printed the results of studies on maternal and infant mortality in the State and have distributed copies to the medical profession. Our first series of postgraduate lectures in obstetrics and pediatrics has been held. There is increasing demand on the part of the county medical societies for the obstetric films we have purchased for their use. The president of the State medical associa-

tion has appointed a maternal-welfare committee, which is studying every maternal death as it occurs. Dr. McPhail, the chairman of this committee, tells me the response of the medical men to the activities of the committee has been most gratifying.

We have held well-baby conferences in the rural areas at the invitation of, and with the active assistance of, the local physicians. These men are learning something about well babies, and they are also learning that the mothers who drive 50 miles or more to have their babies looked over really want this kind of service. An increasing number of them are conducting well-baby health conferences with the assistance of the county nurse, and many of them are now beginning to offer well-baby supervision in their own offices.

I am sure the medical profession is more aware of its responsibility for the welfare of our mothers and babies than it has ever been before. This is due in part to direct efforts, but also to increased demands upon the doctors for the kind of service that an increasing number of mothers are learning they should have. Soon there won't be a clubwoman in the State of Montana who doesn't know the minimum essentials of maternal and infant care.

Last year one-fifth of the mothers of newborn babies had received our antepartum letters. There is a rapidly increasing demand for these letters and for our literature on infant feeding and care. Articles on safer motherhood have appeared in State women's magazines, the State farm journal, and the newspapers.

Because of the prevailing ignorance among young mothers of the fundamentals of motherhood, every effort is being made to encourage the teaching of mothercraft to girls in junior high schools and high schools. Perhaps the most effective educational attack of all is that used by the public-health nurses in the family visit. The nurses visit mothers in the remote sections of the State who are not reached by any other means. Many of these mothers have expressed surprise and heartfelt gratitude at the nurse's visit to them and their babies. This combining of actual service with education is effective education. After she succeeds in getting the expectant mother under the doctor's care, the nurse encourages her to report regularly; she frequently drives many miles to make home visits to patients upon whom the doctor wishes reports; she assists with preparations for home deliveries and assists the doctor at the delivery when possible. Extensive home-delivery service cannot be offered where but one nurse serves a vast county, yet this service is offered as part of the generalized nursing program. Postpartum visits are made wherever the physician wishes the service. Montana physicians have never had this type of nursing service before and most of them have been slow to accept it.

A most important service is rendered by the nurse to the newborn infant. If skilled nursing care is needed anywhere, it is here. Better nursing care for the baby born at home would have a greater effect on our neonatal-mortality figures than any other factor except, of course, better obstetrics. In most home deliveries the care of the baby is left to the grandmother, and we have learned a lot about babies since her time. But in order to touch this problem we need many more public-health nurses in the rural areas.

Our maternal-demonstration service in the Fort Peck Dam area offered an opportunity to establish a complete maternal-nursing service. In the towns of the project the great majority of deliveries were

home deliveries. These towns are all within a radius of 15 miles, making a delivery service feasible with a small staff. Mothers' classes are held at the health center; antepartum, delivery, and postpartum nursing service is given by the nursing staff under the direction of the local physicians, all of whom are cooperating in the program. Antepartum medical service is given by the physicians in their offices, and every delivery is attended by a physician. The babies are kept under nursing supervision, and the physicians offer well-baby supervision. The infant mortality in the Fort Peck area, one of the highest in the State, has been cut in half during the time the demonstration service has been in effect. We are developing methods and gaining experience which we hope to have the opportunity to use in other sections.

In one area, in which the maternal and infant mortality rates have been consistently high, we are planning to offer bedside nursing service to mothers and babies as an approach to the maternal-care problem.

In every county in which we have set up a maternal and child-health program, we have organized a local council of leading citizens and representatives of every organization in the community interested in the welfare of its mothers and children. This council studies local needs by conducting health surveys and mobilizes all available local resources to meet the needs as far as possible. As this Conference on Better Care for Mothers and Babies represents professional groups, citizens' groups, and governmental agencies, so these little county councils represent groups working together for a common cause. If my faith in humanity ever lags, it is soon restored by the thought of some of these little groups giving country dances and box "socials" to raise money to help the county nurse in her work.

The facilities for maternal care of the poor in Montana are indeed a problem. They are just as bad as, or worse than, anything we heard about yesterday. One of our greatest problems is that there are no facilities whatever for the care of families on work relief and those on farm-security grants, and, when you consider that in some of our counties every farm family is on some form of work relief or farm-security grant, you have some idea of our problem.

I will give you one instance. The day before I left home I received a letter from a physician in one of the western counties, which are in just as bad shape financially as the eastern counties because the poor dry-land farmers have moved over to the western part of the State to perish in pleasant surroundings. This doctor said he had a patient 7 months pregnant who had recently moved in from the eastern section of the State. She hadn't been in the county long enough to be considered a county patient. Besides, the young husband had received a W. P. A. job. This mother had a Cesarean section in a previous delivery and was now in need of another operation, and there was no way whatever that it could be performed. Neither of the physicians in the county is a surgeon and besides there is no hospital in the county. A surgeon in a nearby city will do the operation, but he feels he should be paid something for it, which is true, and the hospital thinks that it also should be paid. I told the physician to try the county commissioners once more and then to see if the local Red Cross chapter wouldn't consider this a disaster—the loss of two lives.

The CHAIRMAN. In planning for this symposium it had been proposed that, in addition to having two State directors of medical services, we might have some directors of nursing services. Then somebody with great forethought said, "Why don't we get some nurses right out of the work that is being done to tell the audience a few stories of the things that actually happen?" We decided that was the thing to do, and we have with us this morning two nurses, one from a New England town, the other from an Iowa county. I am going to ask each of them to tell you a few stories about what they have actually done since they went into this job of helping mothers at the time of childbirth. I am going to call first on Miss Virginia C. Bailey from Vermont, and after that on Miss Ruby Brouillette, from Iowa.

Miss Bailey comes from a little demonstration area, the Enosburg health unit, in the State of Vermont. The work that she is doing covers three towns, and one of these little towns that Miss Bailey visits would fit into one of the crevices of a county out in Montana.

Miss BAILEY. The Enosburg health unit is made up of three towns located near the Canadian border. They have a total population of 4,890. Dairying is the principal industry in two of the towns. In the third town there is a large paper mill. The population is American and French-Canadian. There are three resident doctors in the towns and one or two come in from the adjoining towns. None of these towns had ever had a public-health-nursing service until I went there in August 1936.

At the close of the first year I had attended 51 of the 99 deliveries. During the first month I was sent by the physicians to visit 16 pregnant mothers and I attended 4 deliveries. One of my first experiences was teaching a blind woman to take care of her daughter-in-law after the baby was born. Before losing her eyesight the woman had done some maternity nursing, and she was soon able to give very good care to her daughter-in-law and the infant. I returned to the house frequently to see that adequate care was being given.

The home in which I have done the most teaching is that of a French family, where there were already 10 children. The man earns $8 a week working on a farm. The mother had never had any prenatal care, so we did not know about her until we were called for the delivery. I went afterward and taught the father to bathe the mother and baby and care for them. I showed him how to change the dressing on the umbilical cord and how to sterilize a piece of clean cloth. He was the only one in the family who could read or speak English. The library in the town buys one health book a month for the mothers to use. I took some of these books to the father while he was at home caring for the mother and baby, and he translated them to his wife. They both became very much interested, not only in prenatal care but in foods and general diet.

One of the most interesting and unusual cases was referred to me by a doctor from out of town. The doctor had not seen the woman, who had been referred to him by the overseer of the poor. As she already had eight children, no complications were expected in this pregnancy. I immediately called on the patient and found that

she expected to be delivered within the next 3 days. This family was living in a shack built on a ledge. It consisted of one room and a loft in which the eight children slept. The one room was furnished with a bed, a stove, a table, and three chairs.

I found the mother with hands and feet swollen. She had been living all winter on beans and potatoes furnished by the neighbors. The husband was out of work. I reported the symptoms to the doctor and procured the necessary supplies for the delivery. I was also able to obtain a supply of evaporated milk for the mother. Evidently the mother was mistaken in her reckoning, as her delivery did not take place until a month after the expected date. However, I continued to visit her frequently and of course reported to the doctor each time.

When the call finally came, one cold rainy night in April, they informed us that because of the mud we would not be able to drive beyond the junction of the main and side roads, but they said, "We'll send some one to meet you." My heart fell when I saw a man approaching us with a lantern instead of the team I had fully expected. I did not feel the need of my coat when I had finished that mile and a half of muddy, uphill walk.

The patient had been in labor for many hours, with very little progress. The children were asleep in the loft. The mother was very tired, so the doctor gave her something to quiet her and everyone settled down to wait. In the morning a neighbor came to get the children and also invited the doctor and me to breakfast. Soon after we came back, the baby was delivered with great difficulty.

Two weeks later the baby died as the result of injuries during the labor. The mother also was very ill. I visited the home daily and taught the father to bathe his wife and care for her. Finding that the journey on foot took up too much time and energy, I rode horseback each day to the home.

When I began work in the Enosburg health unit, the only pregnant women I visited were those referred by the doctors who told the mothers I was coming. Later on in the year various friends and neighbors would advise the mothers to call me in, which showed that they realized the benefits of our service. Toward the end of the first year I was visiting patients who were in the third or fourth month of pregnancy. This meant that we knew them long enough to strengthen the relationship with the family and with the physician.

Many of these people are very poor. They would live quite differently with some assistance. Alone I cannot do much, but with the active cooperation I have received from the physicians and the citizens of the town, I feel that each day motherhood is becoming safer in the Enosburg health unit.

The CHAIRMAN. About 2 years ago Dr. Bierring, the commissioner of health of Iowa, and one of his assistants came to discuss with us the establishment in Iowa of a demonstration of home nursing at the time of delivery and complete maternity-nursing service in one of the counties. We discussed the relationship between this home-delivery and prenatal nursing service and the work that was being done in the county by the physicians at the time. We found that in the county that had been selected the physicians had themselves asked

for a plan of action, with the assistance of the State department of health, the county health department, and the county welfare department, that would make possible a complete program of maternity service for the women in the county. Apparently the State department of health, the county health department, the county medical society, and the county welfare department all together had agreed to see what could be done, what plan could be made to establish a program that would insure better care for the women.

The maternal mortality rate in this particular county had been high over a period of years, higher than the average for the State, and that was one of the reasons for the selection of the county.

The program began some time ago. The members of the medical society and all the physicians in the county are cooperating in the project. The physicians are being paid from funds of the State department of health for their service during the prenatal period, by the county welfare department for their service at delivery for women in the community who are unable to pay. The State department of health, through the county health department, assists in providing the nursing service for this unit of work.

Today we have with us Miss Brouillette, one of the nurses actually doing the work in this county. She will tell us some of her experiences. I should like to say that Dr. Boyce, one of the practicing physicians in the county who has been instrumental in making this project possible, is also here today. Miss Brouillette, will you tell us your experiences?

Miss Brouillette. Perhaps only by citing one of the cases that we have chosen from our files more or less at random can I give you a graphic picture of what is being done in the maternal and child-health demonstration in Washington County, Iowa.

In this particular case three antepartum calls had been made to the mother. The third call was made at request of the doctor, who had suspected that the mother was not cooperating. However, it was found then that most of the preparations for the home delivery had been made and the mother was apparently following the physician's directions.

Without any warning symptoms the mother had a difficult labor that resulted in an injury to the 8-pound baby boy. With patient efforts the infant was resuscitated, but the prognosis was very bad. The nurse called the next morning and gave full care to the mother and the baby. The mother had no complaints but the baby was still very listless. Very thorough instructions were given to the parents, and a day's supply of complementary feedings was prepared. The father watched closely as the technique of sterilizing all supplies was demonstrated. Before leaving, the nurse placed the baby at the mother's breast and followed this by giving a complementary feeding to demonstrate each step in the day's care of the baby. The regularity of the schedule, the proper manner of feeding, and the desirable temperature for the baby's welfare were stressed. Nothing could be done except to hope all efforts had not been futile.

The next morning the father met the nurse at the door and proudly informed her everything was ready. He had learned the value of sterilization and was pleased with his ability to carry out the instruc-

tions. He kept the bottles and nipples and the baby's tray sterile during the day by placing them in a kettle of water on the stove, which was boiling most of the time.

The mother's condition was satisfactory and the baby seemed somewhat stronger. Daily nursing care was given to the mother and special attention was given to the infant. Every day showed perceptible improvement in the baby's condition. It was necessary to repeat the instructions frequently and always to praise the father highly for his cooperation. He prepared the meals for three older children in the family and did all the housework. He took especial pride in doing the laundry.

Because of the sutures, the mother remained in bed 12 days. On the twelfth day the nurse left the mother sitting up on a chair, nursing the baby, who had regained his birth weight and, best of all, could cry lustily.

Of course the doctor was in supervision, but it was gratifying to hear the doctor say that the baby's life was saved by good nursing care. That we know was not entirely true, because the family's cooperation was essential. There was much time for teaching in the home and, needless to say, the opportunity was not lost.

An interesting fact about this mother was that she had never remained in bed more than 4 or 5 days after her previous deliveries. One of the neighbors told me she saw her up doing a washing on the fifth day after one of her babies was born, but this time she had followed the doctor's and the nurse's instructions without question.

In our delivery service, a nurse attends the physician on "eligible cases"—that is, the indigent and "borderlines." The nurses are equipped with fully fitted bags of supplies to give the best service during a confinement and in postpartum care. The packets furnished are made up by the nurses and sterilized at the Washington County Hospital for the use of the doctor at all home deliveries. These packets contain all supplies essential for an aseptic delivery, including the doctor's gown and gloves. In addition, the packets contain pads that are left for the mother's use during her lying-in period. Many a doctor's appreciation has been stimulated through the use of these packets.

The greatest distance we travel from home is about 25 miles, which really seems 75 in the middle of the night on our muddy or icy roads. Only an Iowan can really appreciate the hazards of driving over such roads.

We may not have reached the ideal goal in this program, but I think you will all agree that we have had some encouraging results.

The CHAIRMAN. The next member of this symposium is Dr. Beatrice E. Tucker, the medical director of the Chicago Maternity Center. The Chicago Maternity Center was started 5 or 6 years ago to undertake to work out a way of conducting deliveries in the home in a satisfactory way; in other words, in a way that would bring good care to mothers in their own homes. Dr. Tucker has been associated with the center from its beginning and has had the guidance of Dr. De Lee through the years.

Dr. TUCKER. The Chicago Maternity Center is a large out-patient, obstetric clinic with facilities so complete that it might be termed a

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traveling hospital. It is located in the midst of the city's slums, and it has become so permeated with the life and the needs of the people it serves that it has a very sensitive and vibrant atmosphere, which colors the behavior of each individual who participates in its activities. Doctors, medical students, and nurses gain here a spiritual experience that we hope will be reflected in their future work.

People often say to me, "How can you live down there in that dirt, in that noise, in that smell?" And I say that I would rather live there than in any other place in the world. The dispensary is in a very interesting neighborhood, the Maxwell Street Market, which is filled with romance and high adventure. Here you see life and pathos and tragedy. While the hurdy-gurdy plays arias from Il Trovatore some mental defective murders three gypsies in a saloon next door and, with the greatest concern, I go over to see if one of them is the mother of the baby we had delivered 6 weeks before.

As Dr. Eliot pointed out, Dr. De Lee is the force behind the dispensary. It is his baby, and for 44 years he has built up in that institution fine traditions of obstetric practice that we are trying to maintain and carry out. This dispensary was the old Maxwell Street Dispensary of the Chicago Lying-in Hospital and, though it is entirely independent at this time, the Chicago Lying-in Hospital and other hospitals in the city give us their complete cooperation and make possible the high standards of practice and the low maternal and infant mortality rates that we have been able to maintain.

The objects of the dispensary are (1) to furnish good obstetric care to the poor women of Chicago in their own homes; (2) to teach doctors, medical students, and nurses the science and art of obstetrics; and (3) to raise in general the standards of obstetric education and care in this country by creating an intelligent public demand for good care. We do this by fostering the writing of scientific and popular articles on maternal and child welfare.

May I divert your attention for one moment to the manner in which Chicago as a whole takes care of the indigent mother? In 1936 some 10,000 poor mothers received free confinement care. Approximately 50 percent were delivered in the hospitals of Chicago—about 4,000 in Cook County Hospital and about 1,200 in 15 private hospitals. The remaining 5,227 women were delivered at home; 1,200 of them were attended by private physicians who received compensation from relief funds, and the remaining patients were cared for by the following out-patient clinics: Central Free Dispensary, Chicago Lying-in Hospital Out-patient Clinic, Chicago Maternity Center, and University of Illinois Out-patient Clinic. These patients were cared for from both private and public funds; that is, each of these private agencies was subsidized by public funds.

I should like to emphasize here that adequate care of the obsteric patient, whether it is given in the hospital or at home, is of necessity expensive. In 1936 the cost for such care in the Chicago Lying-in Hospital was $7.29 per diem, or $72.90 for 10 days. During the same period obstetric care cost the Chicago Maternity Center $20 per confinement. It is impossible accurately to compare the cost of home and hospital deliveries because many factors that are not analogous must be considered. However, in general, one might state that in a teaching clinic the cost of adequate prenatal, delivery, and postpartum care in the home is about one-fourth the cost of ade-

quate care in a teaching hospital. We consider that both these services are necessary.

In reviewing maternal welfare in Chicago, one must not fail to point out that the Chicago Health Department and the Infant Welfare Society gave prenatal care to over 9,000 mothers, and that the Visiting Nurses' Association rendered the greatest part of the postpartum care to the patients delivered in the home.

We have noted how the dispensary fits into the general picture of Chicago's maternity care. Besides delivering, on the average, 2,400 babies a year in the home, we care for abortions and other complications of pregnancy. We have antepartum, postpartum, luetic, cardiac, gynecological, and cancer-prevention clinics at the center itself. Routine Wassermann and hemoglobin tests are made for each prenatal patient.

Recently we have started a group of mothers' clubs in connection with our antepartum work. Registration is urged early in pregnancy, but 15 percent of our cases are on emergency calls. The only prerequisite for care is poverty—the inability of the patient to pay a private physician. We honor any call coming to us at any time of the day or night that concerns the care of a pregnant woman or a newborn baby. There is no distinction as to race, color, or creed. We not only care for our own patients but act as a liaison clinic between the Chicago Health Department, the Chicago Police Department, the hospitals, private doctors, and midwives. We place our supplies, personnel, and equipment at their disposal. Within the last 2 months we have started a service whereby we will furnish to private doctors in the city who are delivering patients in the home the necessary equipment and a nurse. This safeguards the lives of many mothers and babies, and we feel that it is an important part of our service.

We cooperate with the Chicago Health Department in operating an incubator ambulance for premature babies. The center furnishes the doctor and the nurse, and the health department pays for the equipment and the transportation. Any doctor or hospital in the city can call for the incubator and we will transport the baby from the home to the hospital or from the hospital to the home.

The center is unique in that it does not only normal but operative obstetrics in the home. Seventy-five percent of the indicated major operative work is done in the home. The other 25 percent of the operative work requires hospitalization, and the close cooperation of Chicago's hospitals, especially the Chicago Lying-in Hospital and the Cook County Hospital, makes it possible for us to carry out this program.

Every precaution is taken to safeguard the life of the mother and her newborn baby. An attending obstetrician and a resident obstetrician are constantly on call and live at the dispensary. Antishock treatment, including blood transfusion, is always available. Each patient that is in labor in the home is listed on a big board in the dispensary. Within 20 minutes after a call comes in, the intern—a graduate physician who has served a 1-year internship in an accredited hospital—a medical student, and a nurse proceed to the home and remain with the mother throughout her labor and until 2 hours after her baby is born, no matter if it takes 3 days.

The resident obstetrician, who has had at least 1 year's experience in obstetrics before he comes to us, goes about the city in a car from case to case. The car is equipped with a radio, and the police department will broadcast calls to him at any time that we need him.

From time to time the doctors on the case telephone to the center and their reports are posted on the board. This enables the obstetrician at the dispensary to tell at a glance what is occurring in each case. If a complication arises, demanding operative interference, a special crew is dispatched to the patient with adequate equipment. An attending obstetrician then supervises the work of the resident and the intern.

The teaching aspect of the work is very important. We train 40 doctors a year in normal obstetrics; 1 resident physician a year in operative obstetrics, and 50 nurses in the nursing care of women who are delivered in their own homes; and 325 medical students come to us each year from Northwestern University, the University of Wisconsin, and Loyola Medical School for a 2-week course.

In a 5-year period we have taken care of more than 15,000 women. There has been a gross maternal mortality rate of 0.138 percent; that is, a maternal mortality of 1 death in every 721 patients. There have been only 4 deaths from puerperal sepsis, 1 in about 3,500 patients. We have an accurate record of every patient we cared for at home and have traced the subsequent course of the patients we refer to hospitals. Every death has been listed that has occurred at home or in the hospital at any time during pregnancy, labor, or the puerperium.

The neonatal-death incidence at the center for this 5-year period was 16.31 deaths per 1,000 live births, and the gross fetal-mortality incidence was 41.5. This includes all babies, whether delivered in the home or in the hospital, who were lost at any time from the fifth month of pregnancy to 2 weeks of age. The corrected maternal mortality rate was 0.09 percent, or less than 1 maternal death to every 1,000 live births. The corrected fetal mortality rate for babies born at home was 1.66 percent.

We do not believe that these results were simply fortuitous. They show what can be accomplished in a poverty-stricken environment when the principles of sound obstetric practice are applied to the care of the maternity case. These principles are enumerated briefly:

1. A trained obstetrician is in complete charge of the work.
2. Adequate prenatal care is available.
3. The patient has constant attendance during labor.
4. Adequate equipment and personnel are available for both normal and operative deliveries.
5. A simple, intensive, aseptic technique is uniformly followed.
6. The patient is cared for in a favorable environment for the obstetric case—that is, the home. Here she is truly in an isolated unit and she is not exposed to infected cases.
7. There is a minimum of operative interference. The incidence is low—6 percent. There is conservative use of Cesarean section—1 in 154 deliveries. Vaginal examinations are limited. Progress of labor is followed by rectal examinations.
8. Good hospitals are available. The efficient cooperation of Chicago's hospitals, especially Chicago Lying-in and Cook County Hospitals, has saved many lives.
9. Hemorrhage control. Doctors are taught to save blood and take alarm early. Antishock measures, including blood transfusion, are constantly available to the patient.

10. The use of pituitrin is absolutely barred until after the birth of the baby. We consider this rule so important that, if a doctor disregards it, he is automatically dismissed from the service.

11. There is a sane use of obstetric analgesia and anesthesia; all repairs and 85 percent of the operative deliveries are performed under local anesthetic.

We do not wish to leave the impression that a complete reversion to home obstetrics is desirable. We consider that the well-equipped maternity hospital is the ideal place for the woman to have her baby. However, we are not dealing with ideal conditions, and the results of the service of the Chicago Maternity Center show that as good results can be obtained in the home as in the maternity hospital and at much lower cost to the community.

The CHAIRMAN. We have one more speaker in this symposium. I should have liked very much to work in right at this point, between what Dr. Tucker has said and what Dr. Williams has to say, the story of what is being done in one of our city public-health departments in a program of home-delivery service. We do not have time.

Dr. Philip F. Williams, who is to give the final talk in this group, is assistant professor of obstetrics at the University of Pennsylvania School of Medicine. He is also chairman of the committee on maternal welfare of the State Medical Society of Pennsylvania. He also was the prime mover in the study of maternal mortality made in the city of Philadelphia a few years ago. Dr. Williams is on the Children's Bureau Advisory Committee on Maternal and Child-health Services and is a great help to the Children's Bureau with his advice from time to time and with his counsel in committee meetings.

Dr. WILLIAMS. I have been asked to speak for a few minutes on the mortality studies being made throughout the United States and their importance in improving the care of mothers and their newborn infants.

The facts connected with maternal deaths have been collected during the past 10 years in State and city surveys over a large area of the United States. The extent to which these surveys have been made is shown on a map of the United States. The area of the survey made by the Children's Bureau, of 15 States,[1] is shaded with horizontal lines. The areas in which individual surveys have been made by other organizations are shown by the black circles. This extensive study of maternal mortality affords us an opportunity to present certain facts and draw pertinent conclusions.

Discounting any personal element in the analyses of the histories of women who died in childbirth, as reported in these studies, we may assume fairly and safely that 60 percent of the deaths might have been avoided. The consensus of opinion in all these reports is that a large proportion of the so-called preventable deaths could have been avoided if the women had had more adequate and efficient care during their pregnancies, deliveries, or postpartum periods.

Furthermore these studies have enabled us to determine whether a preponderance of deaths from one cause or another occurred in a particular locality. Uniformly it is found that deaths from septic abortion plus deaths from sepsis following delivery at term, in al-

[1] Maternal Mortality in Fifteen States. U. S. Children's Bureau Publication No. 223. Washington, 1934.

most equal figures, constitute roughly 40 percent of all puerperal deaths. Deaths from puerperal hemorrhages in widely distributed areas and in far-separated cities constitute 12 percent of such deaths, the rural rate being appreciably higher than the urban rate.

The deaths classified as toxemias of pregnancy, which include convulsive conditions, are significant in their variations. In the studies of cities on the Atlantic and Pacific coasts, the average rate is just under 12 percent. When we examine the broad rural areas reflected in the survey of maternal mortality in 15 States we find that the percentage of toxemic deaths rises suddenly to 26. Two Southern States, Georgia and South Carolina, with large rural and large colored populations, show even higher death rates from toxemias of pregnancy. In each of these two States one of every three maternal deaths occurs from toxemia of pregnancy, a condition almost always preventable.

These reviews are of the utmost significance in pointing the way to improving the care of maternity patients. They show a definite relation between lack of prenatal care and the development of fatal degrees of toxemias of pregnancy. They impress upon us the necessity of extending prenatal services to rural areas, and the need for insisting upon even greater degree of care and study of the patients in existing prenatal clinics.

Studies of deaths from hemorrhage signalize the need for more widespread education so that both the laity and the medical profession will realize that any bleeding during pregnancy is dangerous and indicates the need for early hospitalization wherever possible. Analysis of deaths from hemorrhage reveals also inadequacies of hospital organization, such as inability to provide for blood transfusions in emergencies and lack of adequate training of students and physicians in the proper management of such cases.

The reports of deaths from puerperal sepsis—infection of the mother after delivery or in late pregnancy—disclose repeatedly the lack of an approach to an aseptic or surgically clean manner of delivery. In countless other instances they reveal imperfections or breaks in the aseptic technique and conduct of labor. Such circumstances should lead hospital staffs to insist upon the adoption of, and adherence to, a rigid technique in delivery rooms. Also they should make physicians and nurses realize the importance of observing as far as possible the fundamental principles of surgical asepsis, especially in home practice whether in city or country. At all times there should be scrupulous regard by both hospitals and physicians for limiting avenues of infection in every manner and by every means.

Deaths caused by accidents of labor, summarized briefly as trauma, include Cesarean sections and other operative deliveries, as well as accidents and injuries sustained at delivery. A study of such deaths shows a disturbing increase in their percentage distribution as we come from rural regions into city-hospital practice. Their occurrence in rural practice may be indicative of a lack of prenatal study. On the other hand, undoubtedly a certain number of these deaths in hospital practice must be attributed to ill-advised and improperly performed operations. No other class of cases reported in these studies emphasizes so strongly the need for consultation before major obstetric procedures are attempted. Such cases require the mature

judgment obtained from long clinical experience in treating complicated cases.

The proportion of deaths from septic abortions as reported in these studies is in some instances as high as 30 percent. The importance of this problem cannot be minimized. It is probably more acute in urban than in rural practice. Because of the many factors involved—social, moral, and economic—its solution lies only in education of the public to the potential dangers of illegal termination of pregnancy.

These factual studies and the deductions made from them lead to the conviction that three forces are necessary to eliminate the avoidable factors in our maternal mortality:

(1) The medical profession, which has made these studies on maternal deaths, must play an important part in initiating and providing means for more thorough education in maternity care, of medical students, nurses, midwives, and practicing physicians. Organized medicine must play an important part if the maternal mortality rate in this country is to be reduced further.

(2) The State has an obligation in this problem of maternity care. It should facilitate the education both of the medical profession and of the public. It should devise means to provide adequate maternity care for patients to whom such care has not been available, either because of their location or because of the force of economic circumstances.

(3) The public must insist upon proper education, so that ignorance and lack of cooperation may be eliminated as factors in maternal mortality.

The initiation of the public's part in this problem of better maternal care rests with you as leaders of organized and influential lay groups.

The CHAIRMAN. Before we finish this symposium, I want to ask Dr. Edwin F. Daily, Director of the Maternal and Child Health Division of the Children's Bureau, to give you in 2 minutes a picture of the spread over the country of some of these interesting projects.

Dr. DAILY. If you will close your eyes for 2 minutes and let me take you on a little trip throughout the United States, I will tell you what some other communities are doing in this field.

Let us start in Maine. Recently I was talking to a French-Canadian nurse up on the Canadian border in Aroostook County, and she told me of the tremendous handicaps that nurses are working under in that vast area, in trying to serve patients who are so far from a physician and who have so little opportunity to obtain the services of the medical profession.

Let us go into Massachusetts, where public funds are being used to provide hospitals with equipment to care for premature infants and to transport these infants from their homes to the hospitals. Centers have been created in all parts of the State to which any premature infant born at home may be sent for care. Not only that, but doctors and nurses and mothers are being taught how to care for premature infants. A similar program was started several years ago in Chicago and, under the able leadership of Dr. Bundesen, has reduced the mortality of premature infants there.

In Connecticut, Rhode Island, and New Jersey a portion of the maternal and child-health funds granted to the States under the Social Security Act is used to pay for the consultation services of obstetric specialists when the patients are unable to afford such service. Qualified obstetricians in all parts of these States are co-

operating in extending their services to the local physicians when they need their consultation and help.

In Maryland, as part of an excellent State-wide program, two nurse-midwives have been placed in remote counties where no medical services were available. These two nurses, both trained at Lobenstine Clinic, have been wholeheartedly accepted by the counties and are providing delivery care never known in those areas before. A few well-trained nurse-midwives have been placed in other States. Unfortunately there are so few nurse-midwives in the United States that the many other areas in which medical services are unlikely to become available for many years to come have little chance of getting them. Dr. Bousfield recently told me that the Julius Rosenwald Fund is willing to train Negro nurses for this type of service to replace some of the colored grannies in the South. Several institutions are interested in providing this type of training for the Negro nurses.

Regular prenatal clinics are now conducted in 62 of the 100 counties in Virginia. Dr. Riggin, the State health officer in Virginia, told me yesterday that the Virginia State Medical Society has requested that prenatal clinics be established as rapidly as possible in all other counties in the State. Local physicians are paid for their services in these clinics. A thoroughly competent obstetrician, employed full time on the State health-department staff, supervises the clinics and renders consultation services.

In Norfolk, Va., the King's Daughters Visiting Nurse Service and Children's Clinic established two prenatal clinics in 1924. This work has expanded until, in 1935, a maternity center was opened with 8 local obstetricians on the attending staff. Four prenatal clinics are now held each week, and both medical and nursing service for home-delivery service is provided free to the medically needy. Three hundred and thirty-six patients were delivered by this group in 1935. There were no maternal deaths.

At Charlotte, N. C., the Charlotte Maternity Clinic has reduced the proportion of deliveries by midwives from 20 to 6.6 percent in 5 years' time and has lowered the maternal mortality rate from one of the highest to one of the lowest in the State. This maternity clinic offers maternal care to "indigents" only, and deals with a stratum of society in which there is a high incidence of syphilis, heart disease, nephritis, tuberculosis, and so forth. It reports that the mortality rate for mothers who attended the clinic before delivery was only one-seventh of the mortality rate for those who were first seen at time of delivery.

In Raleigh, N. C., prenatal clinics have been operated for 8 years by the obstetric staff of Rex Hospital for the benefit and care of any needy mother; some of them are delivered in the hospital and some of them at home. In the entire 8 years there has not been a death of a mother who had attended the prenatal clinic.

In South Carolina the State maternal and child-health director reports that during the first 3 months of this year 95 regular prenatal clinics and 47 well-baby clinics were being conducted throughout the State. The State pays 105 local physicians for their services in these clinics, and 2,575 patients attended them during this 3-month period. Drugs for the treatment of syphilis are provided the

physicians free of charge. This same report shows that 34,000 children were examined by dentists and dental hygienists and that health films were viewed by 14,805 people.

A report of a maternal and child-health demonstration in Clark County, Ga., with a population of 24,000, half of which is Negro, shows that over a 3-year period the maternal mortality rate for the Negro mothers not receiving prenatal care was about four times as great as that for mothers receiving prenatal care. The stillbirth rate was four times as great for the white mothers not receiving prenatal care as for those receiving such care.

Since 1918 the Child Welfare and Community Health Association, a private agency in New Orleans, has provided not only public-health-nursing service during pregnancy and at time of delivery but has also made available funds to pay local physicians for delivering needy patients. Approximately 1,500 deliveries a year are cared for by this organization, which also maintains 8 prenatal and post-partum clinics. In the past 5 years this group has provided care for over 7,000 cases. The maternal mortality rate among clients of this agency was 47 per 10,000 live births—a rate less than half that for the city as a whole.

In Cleveland, Ohio, the report of the Cleveland Child Health Association shows that prenatal group-instruction classes are held in all parts of the city and are available to any expectant mother in the city; 1,038 classes were held in 1936 and 156 Cleveland physicians referred patients to the classes. Among the 2,595 women attending the classes who were delivered in 1936 there were only 2 maternal deaths—a maternal mortality rate of less than 8 per 10,000 live births as compared with 38 per 10,000 live births for the city as a whole. As all classes of patients were included in the program, these are presumably comparable figures. The work of this group in Cleveland warrants the careful consideration of everyone interested in maternal welfare.

The Wisconsin Public Welfare Department recently reported that in Racine County, where facilities for prenatal and postnatal care and hospitalization of obstetric patients are available, the maternal mortality rate over a 3-year period was only one-half as large as in the counties without such facilities. The town chairman in one of these counties reported in this study:

> If a farmer has a sick sow * * * he can get expert advice free of charge but if his wife or children are sick he cannot get medical care for them unless he has the money.

Harding County, S. Dak., formerly without a physician or a nurse, has provided a county doctor and a public-health nurse from funds allotted under the Social Security Act. Reports from this county are stranger than fiction. An obstetric patient with a serious hemorrhage impending was transported 110 miles to a hospital, where a successful Cesarean section was performed. One patient was only 28 miles away, yet it took 4 hours to drive and shovel through snow drifts to reach her and safely deliver her child.

In Las Animas County, in southern Colorado, which covers a vast area of farming and mining communities, the local physicians who include obstetrics in their practice are cooperating with the local public-health nurses in making available prenatal, delivery and

postnatal care for all residents of the county. There were 202 home deliveries cared for by this staff during the first year the service was available. A similar type of service is being provided now in many counties over the country with the aid of social-security funds.

In five counties in northeastern Oklahoma, where medical or nursing attendance for delivery was practically unknown, it is now being provided and paid for with social-security funds. Local physicians are paid for rendering prenatal, delivery, and postpartum care. A full-time obstetrician has been placed in this area who renders consultation service and is raising the standards of maternal care. Similar plans are now ready to be started in St. Mary Parish, La., and in two counties in North Carolina.

The Children's Bureau files are full of such reports from all parts of the United States. We have only made a beginning toward providing the medical and nursing service every mother and her infant has the right to expect in the United States. The most encouraging part of these reports is the fact that wherever good maternal care has been provided for all the mothers in any community there has been a decrease in the maternal death rate.

The CHAIRMAN. I know Dr. Daily could go on over the whole country and give you many more pictures of the interesting things that are happening. I want you to realize again, though, that when we speak of some special project in a State or it may be of several projects going on within the State, that it is rarely representative of the whole State, that in practically no instance is the whole State covered by work of which the project is typical.

I should like at this point to turn the meeting back to Miss Lenroot.

(Miss Lenroot took the chair.)

The CHAIRMAN. I want to tell you that about 500 delegates have registered from 44 States, Hawaii, Alaska, and the District of Columbia. It is a wonderful inspiration to have this outpouring of interest and willingness to take counsel together.

Before the next speaker attained outstanding national reputation in the field of industrial economics by showing how social justice and economic justice can be brought into management and made a part of it, and before she attained national recognition for her Federal service, she was the Director of the Editorial Division of the Children's Bureau, and so we claim her as one of our alumnae.

When the President first came to Washington he was impressed with the need for developing a practical means of bringing closer together the different Federal agencies concerned with health and welfare service. He asked our speaker to organize the Interdepartmental Committee to Coordinate Health and Welfare Activities and to become the chairman of the committee. She has retained that job since she left her position as Assistant Secretary of the Treasury and has rendered most useful and remarkable service in connection with the committee.

It gives me the greatest pleasure to present to you one who, of all in the country, is best fitted to sum up the pictures that we have had drawn as to what needs to be done and how it can be done. "The Goal We Seek" will be presented by the Honorable Josephine Roche.

The Goal We Seek

By the HONORABLE JOSEPHINE ROCHE, *Chairman, Interdepartmental Committee To Coordinate Health and Welfare Activities*

I cannot tell you how I regret not having been here for all your discussions yesterday. My regret is mitigated only a little by the fact that if I had heard all the very important and interesting speakers discuss the various topics that have been discussed before this meeting, I am sure my feeling of being entirely unnecessary in the program would be even stronger than it is now—and it is quite strong enough after listening to the discussions this morning.

It seems to me very significant that despite the fact that this morning is dedicated primarily to achievements that have been accomplished, practically everyone who has spoken this morning, and Dr. Eliot's own words of exhortation and warning, come back to a continued warning of the task that lies ahead, of the unfulfilled needs that demand constructive action.

Very frequently I have heard, in the past, as you all have, the reference to the fact that the death rate of babies and mothers is the best, most sensitive index of the success of public-health effort everywhere. That certainly is true, and it is equally true that the death rate of babies and mothers and the rate of illness of babies and mothers are the best indexes of whether or not this civilization we boast of is making progress toward the goal that we Americans of this democracy of ours today vision just the same, I think, as those who founded this democracy visioned it for all men and women.

They called that goal one of equal opportunity for all and special privilege for none, and I don't think any person in our generation or in generations to come has found or will find a better definition of what people of a democracy want to see come about and intend to have come about for themselves and their children. As we test the progress we are making toward that goal by this sensitive index, we can see very readily that we have, as was pointed out today and certainly must have been pointed out frequently yesterday, a very long way yet to go.

Miss Lenroot, in a recent article that I noticed, referred to the approximately 2,000,000 babies who are born each year in this country of ours. About a million of them, or over half, are born in the homes of men and women who are on relief or are in the income group below $1,250 a year. We have known for almost a quarter of a century—ever since the Children's Bureau under the leadership of that great woman we all remember and revere, Julia Lathrop, pointed it out in the early maternity and infancy studies—that the babies of the poor die at five times the rate of the babies of the well-to-do. We know that despite encouraging exceptions here and there those facts prevail today.

And so when we think of half the babies born in this democracy of ours, we have got to think of them as still denied that equal opportunity which was the goal of the founders, even as it is our goal—denied that equal opportunity with the other half of the babies even to have 1 year of life.

We can go on with this index of baby deaths in relation to other public-health activities and successes, and we find exactly the same thing happening throughout America today in the other part of the population—a constantly rising death rate as economic opportunity, income, and the chance for a decent life go down.

And so today, despite the successes that we have had and the encouragement that they bring, we still face a very real and a very lasting challenge. Certainly the encouraging things that we have heard this morning—and they are, of course, only a small percentage of the encouraging developments that are taking place throughout America—and the gains that have resulted from them give us very definite cause to believe and to hope, to know, in fact, that this index of the progress of civilization—the health of babies and mothers—is going to mount more rapidly in the future than it has in the past. There are a good many reasons for that, of course, but today throughout this country localities, communities, States, and counties, private groups, and public groups are uniting with each other, cooperating with each other and with State and Federal governmental agencies to help push this index up higher than it has gone in the past.

We know that a great deal of the stimulus and a great deal of the concrete pointing of the way to this progress—small as it is, it still is progress—has come about since the passage of the Social Security Act, with its provisions in many fields for conserving human life and human rights and human welfare.

We know, of course, that the various agencies, Federal and State, charged with the responsibility of carrying out the specific provisions for safeguarding human beings, for eliminating certain hazards to which they have been subjected in the past have been cooperating with one another. They realize that only as an integrated program, recognizing the interrelation of human needs and the extreme importance of relating activities for meeting those needs, is put forward can the maximum results come to the men, women, and children in whose interests this great act was passed.

We get tremendously stirred sometimes by our own responsibilities, on seeing our own particular program go forward. We must never forget that the passage of the great acts, the great measures of far-reaching importance, such as the Social Security Act and others of a similar nature, was not to give special privileged groups, trained in professional or other lines, the chance to do great work, but to help the men, women, and children who live in the counties and States, cities and towns, and the drought areas of this country. Our success, however important it may sometimes seem to us, is of value only as it is translated into living realities with the men, women, and children who make up America.

Important as are the specific provisions under which you work in the field of child and maternal health, in the field of general public health, in the field of welfare, as important as are your particular tasks and as encouraging as are the gains that have been made,

chiefly under the stimulus of the Social Security Act, I think you will agree with me that there is a fact even more important than the specific things that act is making possible in terms of Federal money, State money, and county money, and the building up of specific welfare services and health services throughout the country. Underlying that act is the adoption by an organized people, speaking through its representatives in Congress, of a great philosophy, now written concretely in the law of our land—that conservation of human welfare, the protection of human life, the building of strong, vital citizenship are definitely a charge on government—local, State, and Federal Government; that we shall no longer permit the waste of human life and human vitality, the denial of human needs, the refusal to face the goal which is still so far from realized; that we are going some day to see in this country every child born in a home with exactly equal opportunity to live, to be educated, to be strong, to earn its living, with that which only half of the children now possess. That philosophy underlies not only the Social Security Act but innumerable other acts and measures that we as an organized people have been fighting for, are fighting for, and are going to continue to fight for.

As citizens, not only as workers in the field of child health and of child welfare, not only as workers in the field of general health and public welfare, but as citizens of a democracy who probably in your lifetime will not yet see that goal realized, you still have, despite the heavy burden of your own highly specialized jobs, the added responsibility, equally important, equally challenging, equally demanding of you, to see that in the other closely allied fields of equal opportunity for the men, women, and children of America, this battle will go on. The health of babies and mothers, the health of fathers, the health of communities, in the last analysis, cannot begin to approximate the goal that we vision for it unless progress is made in these other closely allied fields of work, of shorter hours, of high wages, of reduced unemployment, of a chance not only to keep life in men's bodies and in the bodies of their families but a chance to develop in fields of a living and a saving and a growing wage. Only as those fields, too, are conquered, as we are beginning in the welfare field to make progress, can you find your own specific objects of interest in this great general goal realized.

It matters not what the privileged group is, whether it is an economic group, or a professional group, or whatever kind of group it is, insofar as the members of any group say for an instant, "The public interest is second to ours," you have got to fight them. It doesn't make any difference how specious or how appealing their arguments are that "our interests take precedence over the interests of the many," they are not working with us.

Special privilege to anyone, as the men and women said who founded this Nation, is still the thing we have to fight against; an equal opportunity for all is the thing we have got to fight for. On that basis, looking forward always, measuring achievements only as they point the way to better and more fundamental successes in the future, are we going really to be able to meet again at some time in the near future and say: This we have done well, but this we must do still better.

I am extremely grateful to you for letting me join you.

The CHAIRMAN. I know that we have had our minds and hearts deeply stirred this morning. I know that every one of us in this audience has been moved, as perhaps never before, to a realization of individual and social responsibility. This is the beginning of the conference and not the close of the conference. The first step in playing our part in achieving the goal that Miss Roche has set before us is to be present this afternoon to hear the reports of the committees of the conference, because only as you have those reports will you be able to take back to your organizations and your communities in concrete, crystallized form, the things that have grown out of this conference.

(Meeting adjourned.)

Tuesday, January 18—Afternoon Session

Katharine F. Lenroot, presiding

The CHAIRMAN. I should like to read a letter that is a very encouraging indication of the response of this conference to the challenge that has been placed before it. This is from Mr. Ralph M. Dunbar, representing the American Library Association at the Conference on Better Care for Mothers and Babies. [Reading:]

> In answer to the question posed at the evening forum, "How may public awareness of the problem of better care for mothers and babies be stimulated?" I wish to say that I believe the 6,000 public libraries in this country may well be considered among the media in this campaign. Libraries, with ever-increasing emphasis on their obligations as a factor in the social order, reach all ages and classes and are planning vigorously to expand library service to rural communities. They are in a strategic position, therefore, to disseminate information about the problem.

We are very glad to have that letter, and I am sure that all the people in this room, as they have thought over the proceedings of yesterday and this morning, would have suggestions of very great value to make, and will make it a point to think over the ways in which every possible avenue of support in the achievement of our goal may be utilized.

I want to announce at this time the appointment of a committee to wait on the President of the United States at the close of this conference. As I said yesterday, the President has invited a committee representing the conference to present to him the report of the committee on findings, to discuss with him the information that has been laid before the conference, and to express to him the spirit that has been manifested in the conference.

The members of this committee are as follows:

Mrs. J. K. Pettengill, chairman of the planning committee.
Fred L. Adair, M. D., vice chairman of the planning committee.
Felix J. Underwood, M. D., chairman of the committee on community resources.
Mrs. Charles W. Sewell, representing the Associated Women of the American Farm Bureau Federation.
Dr. Eliot and Miss Lenroot, representing the Children's Bureau.

On the program is an item, Summary of Conference Proceedings, by the chairman, but I am going to spare you that. I think I have done enough talking at this conference, and I do not need to summarize for you; I know each one of you has a vivid picture in his own mind of the evidence of need and the evidence that the need can be met by the application of the knowledge that we already have, if only the resources can be made available to meet this need and can be fully utilized.

Therefore, all that I shall add to this brief summary of the conference proceedings is that if in the past the staff of the Children's

Bureau has felt deep concern about this problem and a deep obligation to use all the resources available to us to help to solve it, our feeling of intense obligation and of the immediacy of the situation presented to us has been very greatly augmented by the fact that you have come together and given this manifestation of your concern. Therefore, I can only pledge all our resources and efforts to going forward in this movement that is so vital to the welfare and happiness of the American people. I am sure that every one of you feels in the same way that the concern that you already had—or else you would not have come to the conference—has been increased many times by the opportunities presented here in the last 2 days.

I am now going directly to the reports of the committees of the conference. I am going to call first on the chairman of the committee on professional resources, Dr. Robert L. DeNormandie.

Report of the Committee on Professional Resources

In order to provide competent maternal care for the mothers in the United States, and further reduce infant and maternal mortality rates, the services of qualified physicians must be made available by the community for all women unable to obtain them unaided. Appropriation of public funds to pay these physicians for their services will be necessary.

This committee is of the opinion that facilities should be provided for the adequate training of obstetric nurses for service in areas where medical service is not available.

The services of consultant physicians specially trained in obstetrics and pediatrics must be made available for all patients in need of their services. A list of the diplomates of the American boards for obstetrics and for pediatrics and of others equally qualified to act as consultants should be made available to physicians in every State, and the cost of the consultant services of these men when patients are unable to pay should be paid from public funds.

There should be made available increased and improved educational facilities. These educational facilities should be utilized not only for the training of physicians and nurses but also for nutritionists, social workers, and others rendering service in this field.

Medical schools should recognize the need for improved teaching of the sound basic fundamentals of obstetric practice. Increased facilities for clinical training of undergraduate and graduate students must be made available either by increased use of existing facilities or by development of additional clinical teaching centers.

Every effort must be made by the obstetric specialists and those interested in maternal welfare in the United States to reduce the number of unnecessary or ill-advised obstetric operations which play such an important part in maternal mortality. No major obstetric operation should be performed without previous consultation by an obstetric specialist.

Hospital care when indicated must be made possible, and the safety of maternal care insured for mothers and infants through provision of proper facilities for care and of adequately trained personnel.

More adequate facilities and better-trained personnel to care for newborn infants, especially those prematurely born, must be made available. The provision of equipment and trained personnel to care for premature infants in hospitals located throughout each State will be necessary in order to reduce the high death rate of these infants at the present time.

Periodic evaluation and appraisal of work being done in hospitals and home-delivery services and in individual practice should be made.

Suitable instruction of the public in the need for improvement in maternal and child care as the necessary part of any program for lowering infant and maternal mortality should be fostered.

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The assistance of the council of medical education and hospitals and other agencies that wish to improve medical services for everyone should be sought.

Robert L. DeNormandie, M. D., chairman.
M. O. Bousfield, M. D.
M. Edward Davis, M. D.
Wilburt Davison, M. D.
Nicholson Eastman, M. D.
Ruth Emerson.
Allen W. Freeman, M. D.
Lillian A. Hudson, R. N.
R. G. Leland, M. D.
Earl B. McKinley, M. D.
Norman F. Miller, M. D.
Margaret Nicholson, M. D.
Alice N. Pickett, M. D.
R. H. Riley, M. D.
Dorothy Rood, R. N.
Harold C. Stuart, M. D.
Elnora E. Thomson, R. N.

The CHAIRMAN. You will recall that yesterday, in announcing the arrangements for the procedure of the conference, I said that there would be no action on committee reports, that they would be referred to as reports of the committees of the conference and not as recommendations of the conference, because of the way in which the conference is made up. The reports are not, however, simply to be filed. They are for your use in reporting the deliberations of the conference and in considering ways in which you can further the purposes for which the conference was called.

Without objection, the report of the committee on professional resources is received and will be made a part of the record of the conference.

Now we will have the report of the committee on community resources, Dr. Felix J. Underwood, chairman.

Report of the Committee on Community Resources

The development of public health in any State depends primarily on an adequate staff of qualified personnel. The expansion of public-health services in recent years has created a demand for many more qualified professional workers in this field than are now available.

The professional staff required to administer properly a maternal and child-health program in a State would include, in addition to the State health officer, a director of maternal and child health with special pediatric or obstetric and public-health training, and a sufficient number of full-time public-health physicians with clinical training in obstetrics and pediatrics to assist in the development and supervision of local medical participation and graduate medical education.

The services of consultants in nutrition, health educators, and medical social workers are essential as the programs are extended in a State.

A staff of thoroughly qualified public-health nurses with a director and a sufficient number of regional or advisory assistants and consultants to administer and supervise the public-health-nursing service in the field are of primary importance if qualified service is to be rendered.

Where there are many deliveries by midwives, there should be nurses with special training in midwifery to supervise this type of service.

Only about one-fifth of the States have obstetricians or pediatricians on their State staffs to aid their maternal and child-health directors in administering and supervising the medical participation.

Only 20 States have nutritional consultants; only 13 States have health educators.

About 6,000 public-health nurses are employed in rural areas in the United States. Approximately 2,500 public-health nurses are paid in whole or in part from maternal and child-health funds, and it is estimated that they are located in less than one-third of the counties in the United States. At least three to four times as many public-health nurses as are now employed in rural areas are needed at the present time.

Properly qualified public-health supervisors and consultants are urgently needed.

Most communities are unable to provide adequate medical and nursing care for mothers and their infants. In addition to the necessity of providing the services of qualified local physicians for routine care and specialists in obstetrics and pediatrics for consultation, there are needed additional public-health nurses, especially those with obstetric-nursing experience.

Only nine States have included in their plans for maternal and child-health services provisions for the payment of obstetric consultation services. Local physicians should be paid for their services, yet funds are now inadequate.

The provision of adequate medical and nursing care cannot be considered satisfactory if there are not resources and facilities to provide safe hospital care when indicated. At least 10,000,000 people in the United States live 30 miles or more from a hospital, often where transportation facilities make this distance too great to cover in an emergency. Many hospitals accepting maternity cases are not planned or equipped to provide safe care for mothers and infants.

Undergraduate and postgraduate education in obstetrics and pediatrics for physicians should be planned on an increasingly adequate basis in cooperation with medical schools and medical societies within the State. Too few physicians and nurses in the United States today have opportunities for adequate education in obstetrics and pediatrics.

WHAT SHOULD BE DONE

1. Additional funds should be provided so that properly qualified professional public-health personnel can be secured in each State and additional training and experience given when necessary.

2. Resources should be made available so that qualified local physicians and specialists may be paid for their services to mothers and infants.

3. Provision should be made for an increased number of hospital beds for maternity care in certain areas of the country and resources to permit the hospitalization of women for whom such care is indicated.

The need to establish better standards of hospital care for maternity cases and for care of newborn infants is apparent. Though many hospitals accepting obstetric patients provide care of high quality, many others are not planned or equipped to give care of the best quality.

Standards of care must include qualifications for personnel in charge of the newborn infants, as well as of the mothers, provision for consultation service of obstetricians and pediatricians, provision for isolation of infected patients, as well as proper physical lay-out and equipment.

A system of inspection and approval of all hospitals or institutions accepting maternity patients should be provided.

In those communities where hospital service is not available, the provision of a diagnostic center in cooperation with the local medical profession would meet a great need, serving as a community health and medical center, providing examining rooms and laboratory and X-ray facilities for the use of local physicians and space for maternal and child-health activities of the local health department, as well as carrying on other activities.

4. The present number of public-health nurses is far below that necessary to insure good maternity care and care of newborn infants. The deficiency in rural areas is more than twice as great as the deficiency in cities. If nursing care of the maternity patient at delivery

is to be provided, there must be an increase in the number of nurses provided for general public-health nursing activities, including maternal and child-health work.

It is apparent that there is a great inequality in the ability of localities to provide adequately for maternity care and care of newborn infants and that assistance from State and Federal Governments is necessary if care is to be provided to the women who cannot otherwise obtain such services.

It is, therefore, recommended that—

> An amendment be made to title V, part 1, of the Social Security Act to authorize larger sums for distribution to the States to provide for improved hospital or home care for pregnant and parturient women and for the care of newborn infants as well as for training personnel for these programs.

It is further recommended that—

> The authorization should provide for gradual development of the program on a sound basis of good quality of service and for necessary increases in appropriations until a sum is reached that will insure care for all women who are unable to obtain care otherwise, either for economic reasons or because of inaccessibility of care in the communities in which they live.

Felix J. Underwood, M. D., chairman.
Jessie M. Bierman, M. D.
Mrs. James R. Cain.
Alta E. Dines, R. N.
John A. Ferrell, M. D.
Don W. Gudakunst, M. D.
C. A. Harper, M. D.
Alma Haupt, R. N.
Fred K. Hoehler.
Ruth Houlton, R. N.
Mrs. George H. Hoxie.
Ruth W. Hubbard, R. N.
H. E. Kleinschmidt, M. D.
Joseph I. Linde, M. D.
A. T. McCormack, M. D.
Mary E. Murphy.
H. S. Mustard, M. D.
Robert E. Neff.
Everett D. Plass, M. D.
Marion Rickert.
Beatrice Tucker, M. D.
C. E. Waller, M. D.

The CHAIRMAN. Without objection, the report will be received and made a part of the record of the conference.

The next will be the report of the committee on resources of citizens' groups, by Dean Harriet Elliott.

Miss ELLIOTT. That title, Resources of Citizens' Groups, perhaps does not convey the full membership on our committee, which was composed of civic groups, volunteer organizations, and professional groups, so that it probably is a little more inclusive than the name indicates.

Report of the Committee on Resources of Citizens' Groups

From the reports of the organizations represented on the committee it is evident that many organizations in their study and activities have recognized the importance of providing better care for mothers and infants and that some organizations have taken action in support of a public program providing for more adequate resources for this work.

The committee makes the following recommendations for the future procedure of interested organizations:

> The committee on resources of citizens' groups recommends that this conference make provision for a continuing committee, the chairman of this committee to be appointed by the chairman of the conference and the chairman of the conference planning committee. It is the hope of the conference that each organization represented in the conference will appoint a member to serve on this continuing committee.
>
> The function of this committee would be to give clearance service to the participating organizations, to provide the organizations with material for study, and to assist in the effort to increase public interest in better care for mothers and babies. It may also consider the legislation which may be deemed necessary to advance this work, and when such legislation has been prepared, provide a means through which organizations endorsing the legislation may act in supporting the measure.
>
> It was the sense of the group that increased cooperation between citizens and professional groups, voluntary and official agencies, is desirable; and that the continuing committee should give attention to ways by which increased opportunities may be provided for coordinating the activities of Federal, State, and local groups.

The committee recommended that the material presented to this conference be made available as soon as possible for the participating organizations and urged those organizations immediately to study the evidence presented to the conference on the need for better care for mothers and babies and consider what action should be taken.

Harriet Elliott, chairman.
Mrs. Katharine Ansley.
Frank G. Boudreau, M. D.
Travis P. Burroughs, M. D.
Hazel Corbin, R. N.
Mrs. Ernest Everett Danly.
Mrs. Saidie Orr Dunbar.
Clifford G. Grulee, M. D.
Malinde Havey, R. N.
Ira V. Hiscock.
J. H. Mason Knox, Jr., M. D.
George W. Kosmak, M. D.
John Oppie McCall, M. D.
Ellen C. Potter, M. D.
Emma C. Puschner.
Agnes G. Regan.
M. Hines Roberts, M. D.
Mrs. Abbie C. Sargent.
I. A. Siegel, M. D.
Mrs. Dora H. Stockman.
Mrs. Nathan Straus.

The CHAIRMAN. Without objection, the report will be received and made a part of the record of the conference.

You will notice that this report, unlike the other reports, does contain a specific recommendation for action of the conference, but with your permission I will defer action on this specific recommendation until we have had the report of the committee on findings.

I now call upon the chairman of the committee on findings, Dr. Fred L. Adair.

Report of the Committee on Findings

The committee on findings, after reviewing the information placed before the Conference on Better Care for Mothers and Babies and the reports of special committees, presents to the conference its statement of findings and suggested plan of action submitted below. The statement is based upon the premise that the continuance and vigor of American civilization depend primarily upon the extent to which the lives and health of newborn infants and their mothers are safeguarded. That the subject of the conference is one of universal interest and concern is indicated by the following:

> In more than 2,000,000 families in the United States in a single year the birth of a child is the most important event of the year.
>
> In more than 150,000 of these families the death of the mother or the newborn baby brings tragedy.

UNNECESSARY LOSS OF MATERNAL AND INFANT LIFE

Each year more than 14,000 women in the United States die from causes connected with childbirth, leaving at least 35,000 children motherless; more than 75,000 infants are stillborn; and more than 69,000 infants die during the first month of life.

An uncounted number of other women are injured in health and children are handicapped in growth and development as a result of conditions associated with maternity.

There has been little reduction in the maternal mortality rate during the 22 years for which records are available. Though the death rate from toxemias of pregnancy shows a tendency to decline, there is no comparable reduction in the death rate from infection (sepsis) or hemorrhage in the country at large.

Committees of physicians in many parts of the country, after careful evaluation of the causes of death of individual mothers, are reporting that from one-half to two-thirds of maternal deaths are preventable.

The stillbirth rate has apparently remained unchanged.

The death rate for infants in the first year of life has steadily declined during the 22 years for which records are available. There has been little decline in the death rate for infants in the first month of life, which accounts for nearly half the total loss of life in the first year. There has been no decline in mortality on the first day after birth. More than one-half the deaths in the first month are deaths of premature infants.

Thus the area in which the least ground has been gained in the saving of infant life is the mortality associated with the complications of pregnancy and labor and conditions of early infancy.

OPPORTUNITIES FOR SAVING LIFE

It has been repeatedly demonstrated that the application of medical knowledge and professional skill can save the lives of mothers and babies. Community resources, both public and private, can be organized to make such knowledge and skill available when needed. It is known that—

Preconceptional and premarital care will help to safeguard the mother from possible later disaster.

Good prenatal care will reduce the deaths of mothers from toxemia and will mean fewer deaths of infants. Adequate preconceptional and prenatal treatment of syphilis will improve the mother's condition and prevent syphilis in the child. Prevention of premature birth will measurably reduce the risk to the infant's life and improve his chance for normal development. The opportunity for prenatal supervision prepares the physician to deal intelligently with conditions of birth.

Good medical and nursing care and good technique at the time of delivery and the opportunity for good hospital care when needed will to a large extent prevent or control sepsis and hemorrhage which endanger the life of the mother.

Skillful care at birth will increase the child's chance to live and develop normally and will to a large extent prevent injuries that result in serious handicaps. Breast feeding and the continuance of careful supervision throughout the neonatal period, especially for infants prematurely born, will further decrease infant mortality.

Adequate postpartum care and follow-up care of the mother will protect her from unnecessary disability and even death. It will also enable her to nurse and give better care to her baby.

The conditions favorable to preserving the lives and health of mothers and newborn infants include the following:

Parents who are well informed and provided with proper food, rest, and living conditions.

Cooperation of the father, who helps the mother to carry out good health measures during the childbearing period.

Adequate medical, dental, and nursing supervision and care during pregnancy, labor, and the postpartum and postnatal periods.

Breast feeding followed by other proper and sufficient food, and an environment free from infection.

Periodic examination and advice by a physician trained in care and feeding of the infant.

Hospital care for illnesses necessitating treatment not available in the home.

Consultation services of a specialist as needed, including obstetrician, pediatrician, internist, dentist, and others in the various medical and surgical specialties.

Good hospital care when indicated by medical need or inadequate home facilities.

It is estimated that of the more than 2,000,000 births, approximately 840,000, or more than one-third, occur annually in families which are on relief or which have total incomes (including home produce) of less than $750 a year. One hundred and ninety thousand

of these births occur in medium-sized or large cities. Six hundred and fifty thousand occur in rural areas and cities of less than 50,000 population.

In 1935, 14 percent of all live births in the United States occurred in the six most prosperous States, i. e., those with the highest per capita incomes, which received 27 percent of the total income of the United States. Fourteen percent of all live births occurred in the six poorest States, which received only 5 percent of the total income.

In 1930, 19 percent of all live births occurred in 10 States which had only 14 percent of the population of employable ages (20–64). Twenty-nine percent of all live births occurred in 10 other States in the United States which had 36 percent of the population of employable ages.

In 1930 there were only 26 children under 1 year of age per 1,000 adults of employable ages (20–64) in urban areas in the United States, but 38 in rural nonfarm areas and 45 on farms.

Even within individual States the highest birth rates generally prevail in the areas in which economic conditions are least favorable. In New York State in 1930 the 9 counties judged to have the lowest planes of living had an average birth rate of 19.4 per 1,000 population, while the 16 counties with the highest planes of living had a birth rate of 17.1. In Mississippi the birth rate for the 45 counties with the lowest planes of living was 25.0, while that for 6 counties with the highest was 21.9.

INADEQUACY OF MEDICAL AND NURSING CARE

In some areas there are too few general practitioners to meet the need and in many more areas there are too few specialists in obstetrics and pediatrics.

The number of nurses in rural areas is still far below the number necessary if reasonably good maternity care is to be given.

Opportunities to enable medical students and physicians and nurses, both student and graduate, to take full advantage of current medical knowledge as to care of mother and child are insufficient.

Although the facilities for prenatal care have been expanding steadily, both in the private physician's practice and in prenatal clinics, and this expansion is reflected in the reduction of deaths from toxemia, records still show that many women have no prenatal care and many others have inadequate care.

While certain communities, through public and private effort, have provided a physician's care and hospital care for mother and child at birth, when such care cannot be paid for by the family, there has been no widespread effort on a national scale to make medical and nursing care at time of delivery generally available either in the home or in the hospital for mothers in families which cannot obtain such care unaided.

A quarter of a million women were delivered in 1936 without the advantage of a physician's care; more than 15,000 had no care except that of the family or neighbors.

Health officials report that many women do not obtain or even seek a physician's care before and at delivery because of inability to meet the expense.

For the great majority of the 1,000,000 births attended each year in the home by a physician there is no nurse to aid in caring for the mother and the child.

In many communities facilities for hospital care are still lacking or are at a minimum. About 200,000 births occur each year in families which live at least 30 miles from a hospital, frequently under transportation conditions which make it impracticable to take the mother to a hospital in emergency.

In urban areas in 1936, 71 percent of the live births occurred in hospitals; in rural areas in the same year 14 percent of the live births occurred in hospitals.

Many hospitals serving rural areas and small cities report that their maternity facilities are not used to capacity because of the inability of families to pay for such care.

RECENT ADVANCES

There has been, especially during the last 30 years, a great advance in medical research related to the physiology and pathology of maternity and early infancy, the education of physicians and nurses in the care of the mother and child, the educational phases of public-health programs for promoting the hygiene of maternity and infancy, and provision of facilities for care.

Increasing opportunity for improving the basic maternal and child-health services has been given in the last 2 years through Federal grants to the States under the Social Security Act, title V, part 1.

Reports from public and private agencies show notable advance in provision of facilities for prenatal care, postnatal care, organization of community services, participation by local physicians, nurses, and interested nonprofessional workers, and education of personnel. On the other hand, resources for medical supervision and care of mothers and children who are unable to obtain such care are poorly developed in many areas. Funds have not been sufficient to provide medical and nursing care at delivery except to a limited extent on an experimental basis.

PLAN OF ACTION

The committee finds that preserving the lives and health of mothers and babies is of such importance to all the people that it warrants immediate and concerted national consideration and national action.

The principal objectives to be sought are the following:

> Full opportunity for practical instruction in obstetrics and the care of the newborn infant—
>
> > For undergraduate students in medical schools, for physicians resident in hospitals, and periodically for practicing physicians in postgraduate courses.
> >
> > For the student nurse and at recurrent intervals for the graduate nurse or the public-health nurse whose work includes maternity nursing in private practice or in public-health service.

Supervision of the mother throughout pregnancy by a qualified local physician, aided by a public-health nurse, preferably one with recent training in obstetrics and care of newborn infants.

Care at delivery by the same qualified local physician, aided by a nurse trained and experienced in delivery nursing care, such care to be given in the home or in an approved hospital provided with adequate obstetric and pediatric services and facilities for caring for emergency or complicated cases.

Postpartum and postnatal medical and nursing supervision in the hospital and the home.

Consultation service by obstetricians and pediatricians to aid general practitioners in their care of mothers and infants.

Community provision for care by a qualified physician and nurse, for consultation service, and for hospital care when indicated, including transportation to the hospital, for the mother or baby to whom such care is otherwise inaccessible or who cannot obtain care unaided.

Further progress toward these objectives can be made through concerted effort of all concerned with maternal and infant care as follows:

By increasing professional resources through—

Better undergraduate education and training for nurses and practitioners of medicine.

Better graduate educational facilities for nurses and physicians.

Adequate provision for training of nurses and physicians for special obstetric and pediatric service.

Better distribution of competent physicians.

More specially trained graduate public-health nurses.

Greater facilities for education of physicians and nurses to be made available by hospitals caring for maternal cases.

By developing in both cities and rural areas complete service for mothers and newborn infants, through the utilization of available competent service under both public and private auspices, and extension and improvement of public services not adequate to meet the need—

The local community to provide maternal and infant care as needed, as part of its public-health responsibility.

The State to give leadership, financial assistance, specialized service, and supervision in the development of local services.

The Federal Government to assist the State through financial support, research, and consultant service.

The committee finds that if this plan of action is to be carried out, Federal participation would be necessary as follows:

Amendment to title V, section 502, of the Social Security Act to authorize a larger sum to be appropriated annually to the States for maternal and child-health services with provision that the increased payments to the States should be used for the improvement of maternal care and care of newborn infants.

The authorization should provide for gradual development of the program, in both its educational and its administrative aspects, and for necessary increases in appropriation until a sum is reached that will insure care for all women who are unable to obtain care otherwise, either because of economic reasons or because of inaccessibility of care in the communities in which they live.

The extent to which this plan can be made a reality depends upon the desire of the public to be adequately served, the leadership of the professional groups in the provision of service of high quality, and the development by public agencies, in cooperation with private agencies and individuals, of a program of education and medical and nursing care which will meet the needs of the various groups in the population.

The committee on findings has reviewed and endorsed the reports of the committee on professional resources, the committee on community resources, and the committee on resources of citizens' groups.

Fred L. Adair, M. D., chairman.
E. L. Bishop, M. D.
Elizabeth Christman.
Dorothy Deming, R. N.
Henry F. Helmholz, M. D.
C. Rufus Rorem, Ph. D.
Mrs. Charles W. Sewell.

The CHAIRMAN. Without objection, the report will be received and made a part of the record of the conference.

Dr. Adair, I think we owe you and your committee a great debt of gratitude. I happen to know they were in session until about 2 o'clock this morning, and I think some of them got up at dawn to complete work on the report, so it really was a great undertaking and we are deeply grateful.

In the report of the committee on resources of citizens' groups there was a definite recommendation calling for conference action, and I thought it would be better if we deferred action on that recommendation until we had all the committee reports before us. I am now going to recall Miss Harriet Elliott to the platform for the purpose of presenting this definite recommendation.

Miss ELLIOTT. The recommendation reads:

> The committee on resources of citizens' groups recommends that this conference make provision for a continuing committee, the chairman of this committee to be appointed by the chairman of the conference and the chairman of the conference planning committee. It is the hope of the conference that each organization represented in the conference will appoint a member to serve on this continuing committee.
>
> The function of this committee would be to give clearing service for the participating organizations to provide the organizations with material for study, and to assist in the effort to increase public interest in better care for mothers and babies. It may also consider the legislation that may be deemed necessary to advance this work and, when such legislation has been prepared, provide a means through which organizations endorsing the legislation may act in supporting the measure.

Madam Chairman, I move the adoption of this recommendation.
(The motion was seconded and voted on.)

The CHAIRMAN. The motion is carried and the committee will be organized according to the procedure outlined in the recommendation.

I want to express my appreciation to all the members of the committees that worked last night and some of them this morning in preparing these reports and to the chairmen who have presented them. They give us some very specific information to take back.

Before coming to the close of our session there are two or three people whom I would like to present to you. You need no introduction to them, but I cannot close the meeting without calling upon a man who has served for many, many years—he does not mind my emphasizing the "many"—as health officer of a State, who has been of great service not only in his own State but throughout the Nation in advancing the cause of public health, and who is now the president of the American Public Health Association, Dr. Arthur T. McCormack.

Dr. MCCORMACK. Those of you who know me well enough will know how embarrassed I am at the idea of having to appear before so large an audience when I am so ill-prepared to say anything to you, but it would be impossible for anybody to be silent who had the opportunity to talk in the presence of the Children's Bureau, managed, as it is, by such able women who generally do most of the talking and do it so briefly and directly that we men have little chance, and when we do, we generally talk too long and do not say much.

It is always a pleasure for any medical man, and any public-health man, to talk to a group that is inspired by common interest in the care of humanity. I am gratified that the whole medical profession of America has determined to put its shoulder to the wheel and assist and help develop the leadership that is necessary for a proper solution of the problems in which we are interested. It is equally important that we who are physicians realize that those who are laymen and taxpayers are the ones that pay all the bills for sickness, as well as all the bills for public health; and equally important for those who are taxpayers and laymen to realize that the only possible solution that we have for the problem lies in organized medicine. For that reason we are bound to succeed together or we are bound to fail together. We medical men are determined that we will succeed, that we will give the service that we can in the spirit of the traditions of our profession since the day of Hippocrates. We will go along with you in helping to develop, as we have tried to do, step by step, sometimes slowly and sometimes moving backward, all along through the years in helping to make this America of ours the happiest and the healthiest place in which a child can be born, and the safest place in which he can be reared.

The CHAIRMAN. I see an old friend of mine, an old friend of the Children's Bureau and of all the official health agencies of the country, who characteristically is standing in the very back of the room. I want the secretary of the State and Provincial Health Authorities of North America to have applause even if he is in the back of the room—Dr. Albert J. Chesley. [Applause.]

We have the president of the State and Provincial Health Authorities with us on the platform. He has an announcement to make to us and we should appreciate anything that he would care to say to us at this time—Dr. Robert H. Riley.

Dr. RILEY. Miss Lenroot said I may speak to the conference on the condition that I confine my remarks to an announcement I have to make.

(Dr. Riley announced a meeting of State health officers, Wednesday morning, January 19.)

The CHAIRMAN. I don't see someone in the room whom I should have liked very much to call on. Is Dr. C. A. Harper of the State Board of Health of Wisconsin in the room? My home State is Wisconsin, you know, and we are all so proud of Dr. Harper. I wish we might have the pleasure of recognizing him, but he is out of the room just now. Let's applaud Dr. Harper anyway. [Applause.]

Mrs. Pettengill, I have to report to you, as chairman of the planning committee, that we are about to conclude our proceedings. I should like to call upon you for anything that you would like to say to us as chairman of that committee.

Mrs. PETTENGILL. I want to say on behalf of the conference planning committee, of which Dr. Adair was vice chairman and Mrs. Nathan Straus secretary, that we come to you this afternoon with that same valedictory feeling that I suppose all committees have, one of reward and relief and regret—a reward, in that our labors have been so finely accepted and have met with such hearty cooperation; relief, because we feel that you have come here expecting something of value and we have felt that this conference has given it to you, and to a certain extent has met with some of the hopes that we held for it; and regret that such fine things as this must come to an end.

When the first letters went out to you, we included in those letters not only a prophecy of what we hoped would happen but to a certain extent a promise to you of what we expected to do in this conference. We hope that your anticipation was met. We hope that you feel that we have held to our promise, which was outlined in the considerations and in the topics set forth before you for your acceptance.

The fact that scores of organizations have been cooperating here is one of the finest demonstrations of what can be done when people have a common interest that I have seen in a number of years. The area of each organization's interest has been different in each case, but we have found our common denominator of interest, and it was in an emphasis on that common denominator that we felt we would find our opportunity. We promised to find that emphasis, to present it to you, and to ask your response.

The reward for the work that has been done should go to those who did the majority of the work, the Children's Bureau; for, after all, we were only as helpful as we could be with our limited resources and to a certain extent our limited abilities, and it was the Children's Bureau and the groups they called in to assist the planning committee that made this conference possible.

The final reward for all of us will be in what comes out in the future—in the near future, we hope, but at any rate, some final

achievement that shall mean something for every mother and child. If that can be something that is started at this conference and carried on through the necessary years, or possibly generations to come, since we are a patient people, we shall feel that it has been well worth while.

To you, the conference planning committee would like to say: Thank you for the most valued opportunity that may be given to any human being, the opportunity for service.

The CHAIRMAN. The test of the success of our conference can be measured by the charts that may be presented to a future committee. You remember you have charts in your envelopes that show a line for maternal mortality and a line for deaths of infants under 1 month. If in a few years from now we can have charts showing those lines steeply descending, the conference will have been a success.

(Meeting adjourned.)

APPENDIXES

Appendix I.—List of Persons Attending the Conference and Organizations Represented

Grace Abbott, University of Chicago, Chicago.
T. F. Abercrombie, M. D., State Department of Public Health, Atlanta, Ga.
Fred L. Adair, M. D., American Committee on Maternal Welfare, University of Chicago School of Medicine, Chicago.
Numa P. G. Adams, M. D., National Medical Association, Howard University School of Medicine, Washington, D. C.
Virginia M. Alexander, M. D., National Urban League, Howard University, Washington, D. C.
J. E. Alloway, State Department of Institutions and Agencies, Trenton, N. J.
Mrs. Fred Altemus, National Council of Catholic Women, Washington, D. C.
Mrs. Arthur J. Altmeyer, National Women's Trade Union League, Washington, D. C.
Miriam Ames, R. N., Johns Hopkins Hospital, Baltimore, Md.
Beulah Amidon, Survey Graphic, National Consumers' League, New York City.
Grace L. Anderson, R. N., East Harlem Health and Nursing Service, New York City.
Mary Anderson, Women's Bureau, United States Department of Labor, Washington, D. C.
Mrs. Katharine Ansley, American Home Economics Association, Washington, D. C.
Ada Hartt Arlitt, National Congress of Parents and Teachers, Cincinnati, Ohio.
Mary Arnold, New York City Department of Health, New York City.
R. G. Arveson, M. D., Frederic Hospital, State Medical Society of Wisconsin, Frederic, Wis.
Reginald M. Atwater, M. D., American Public Health Association, New York City.
B. F. Austin, M. D., State Department of Public Health, Montgomery, Ala.
Ellen C. Babbitt, Washington, D. C.
B. B. Bagby, M. D., State Department of Health, Richmond, Va.
Virginia C. Bailey, R. N., Enosburg Health Unit, Enosburg Falls, Vt.
James N. Baker, M. D., State Department of Public Health, Montgomery, Ala.
S. Josephine Baker, M. D., Princeton, N. J.
Mrs. Harris T. Baldwin, National League of Women Voters, Washington, D. C.
R. W. Ball, M. D., State Board of Health, Columbia, S. C.
Mrs. Mary T. Bannerman, National Congress of Parents and Teachers, Washington, D. C.
Elizabeth Bardens, Maternity Center Association, New York City.
Margaret Barnard, M. D., New York City Department of Health, New York City.
Robert S. Barrett, The National Florence Crittenton Mission, Alexandria, Va.
P. H. Bartholomew, M. D., State Department of Health, Lincoln, Nebr.
Clara Bassett, National Committee for Mental Hygiene, New York City.
Leona Baumgartner, M. D., New York City Department of Health, New York City.
Helen Bean, R. N., United States Public Health Service, Washington, D. C.
Mary Beard, The Rockefeller Foundation, New York City.
Willard W. Beatty, Office of Indian Affairs, United States Department of the Interior, Washington, D. C.
Mrs. Clara M. Beyer, Division of Labor Standards, United States Department of Labor, Washington, D. C.
Hugh J. Bickerstaff, M. D., State Department of Public Health, Atlanta, Ga.
Jessie M. Bierman, M. D., State Board of Health, Helena, Mont.

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Walter L. Bierring, M. D., State Department of Health, Des Moines, Iowa.
Arthur W. Bingham, M. D., Advisory Committee on Maternal Care, Medical Society of New Jersey, East Orange, N. J.
Rev. John J. Bingham, Catholic Charities, New York City.
Miriam Birdseye, Extension Service, United States Department of Agriculture, Washington, D. C.
Dorothy G. Bishop, American Association of Medical Social Workers, Massachusetts Memorial Hospital, Boston.
E. L. Bishop, M. D., Tennessee Valley Authority, Chattanooga, Tenn.
J. Lewis Blanton, M. D., West Virginia chairman, American Academy of Pediatrics, Fairmont.
C. A. Boice, M. D., Washington County Health Unit, Washington, Iowa.
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D. L. Smith, M. D., Maternal and Child Welfare Committee, State Board of Health, Spartanburg, S. C.
Mrs. Ida B. Wise Smith, National Woman's Christian Temperance Union, Evanston, Ill.
Lillian R. Smith, M. D., State Department of Health, Lansing, Mich.
Mrs. Martha Fisher Smith, State Department of Institutions and Public Welfare, Nashville, Tenn.
Nancy Lea Smith, American Federation of Teachers, Chattanooga, Tenn.
Mrs. Reba B. Smith, National Florence Crittenton Mission, Alexandria, Va.
R. H. Smith, State Medical Society of Wisconsin, Madison.
Mrs. William B. Snyder, General Federation of Women's Clubs, Shepherdstown, W. Va.
Edwin D. Solenberger, Child Welfare League of America, Philadelphia, Pa.
M. Attie Souder, Farm Security Administration, United States Department of Agriculture, Washington, D. C.
Mrs. Elizabeth S. Soule, University of Washington, Seattle.
Mrs. Blanche R. Speed, R. N., State Board of Health, Laurens, S. C.
Helen Stacey, American Home Economics Association, New York City.
Louise Stanley, Bureau of Home Economics, United States Department of Agriculture, Washington, D. C.
Mrs. Sina H. Stanton, Council of Women for Home Missions, Bethesda, Md.
Mrs. Mabel K. Staupers, R. N., National Association of Colored Graduate Nurses, New York City.
E. L. Stebbins, M. D., State Department of Health, Albany, N. Y.
Mrs. Ethel R. Stephens, American Federation of Teachers, Howard University, Washington, D. C.
Marietta Stevenson, American Public Welfare Association, Chicago, Ill.
Gladys Berger Stewart, Missouri Chamber of Commerce, Ava, Mo.
Julia C. Stimson, R. N., American Nurses' Association, New York City.
Ruth E. Stocking, M. D., Social Security Board, Washington, D. C.
Mrs. Dora H. Stockman, The National Grange, East Lansing, Mich.
Hannah M. Stone, M. D., Birth Control Clinical Research Bureau, New York City.
J. B. Stone, M. D., Virginia chairman, American Academy of Pediatrics, Richmond.

Mrs. Nathan Straus, National Council of Jewish Women, New York City.
Elwood Street, Board of Public Welfare of the District of Columbia, Washington, D. C.
Mrs. Elwood Street, National League of Women Voters, Washington, D. C.
Harold C. Stuart, M. D., American Academy of Pediatrics, American Pediatric Society, Harvard University School of Public Health, Boston, Mass.
Gertrude S. Sturges, M. D., American Public Welfare Association, Wakefield, R. I.
Mrs. William North Sturtevant, Association of Junior Leagues of America, Washington, D. C.
John Sundwall, M. D., University of Michigan, Ann Arbor.
Lewis K. Sweet, M. D., Children's Bureau, United States Department of Labor, Washington, D. C.
Mary E. Switzer, United States Treasury Department, Washington, D. C.
Laura L. Taft, State Board of Social Welfare, Des Moines, Iowa.
Lida Lee Tall, National Education Association, Towson, Md.
Amy Tapping, Social Security Board, Washington, D. C.
J. Gurney Taylor, M. D., Milwaukee, Wis.
Ruth G. Taylor, R. N., Children's Bureau, United States Department of Labor, San Francisco, Calif.
Harold Teel, M. D., Harvard University School of Public Health, Boston, Mass.
Ruth E. TeLinde, R. N., Syracuse University, Syracuse, N. Y.
Douglas A. Thom, M. D., State Department of Mental Diseases, Tufts College Medical School, Boston, Mass.
Arthur William Thomas, M. D., State Department of Health, Columbus, Ohio.
M. Fleeta Thomas, Ohio Public Health Association, Columbus, Ohio.
L. R. Thompson, M. D., United States Public Health Service, Washington, D. C.
Elnora E. Thomson, R. N., National Organization for Public Health Nursing, University of Oregon Medical School, Portland, Oreg.
Janet Thornton, American Association of Medical Social Workers, New York City.
Mary W. Tobin, R. N., School of Nursing Education, Duquesne University, Pittsburgh, Pa.
Kathryn Trent, R. N., National Federation of Business and Professional Women's Clubs, State Board of Health, Dover, Del.
Mrs. Augustus Trowbridge, Council of Women for Home Missions, New York City.
Beatrice E. Tucker, M. D., Chicago Maternity Center, Chicago, Ill.
Mrs. William O. Tufts, National Council of Federated Church Women, Washington, D. C.
Mrs. C. H. Turner, National Congress of Parents and Teachers, Redondo Beach, Calif.
Mrs. Mark Turner, The National Grange, Herndon, Va.
Felix J. Underwood, M. D., Conference of State and Provincial Health Authorities of North America, State Board of Health, Jackson, Miss.
Rua Van Horn, Office of Education, United States Department of the Interior, Washington, D. C.
Cornelia Van Kooy, R. N., State Board of Health, Madison, Wis.
Annie S. Veech, M. D., Louisville Department of Public Health, Louisville, Ky.
V. K. Volk, M. D., Saginaw County Health Department, Saginaw, Mich.
R. A. Vonderlehr, M. D., United States Public Health Service, Washington, D. C.
Clarice Wade, National Congress of Parents and Teachers, Washington, D. C.
Mrs. R. Gordon Wagenet, National League of Women Voters, Washington, D. C.
Marguerite Wales, R. N., W. K. Kellogg Foundation, Battle Creek, Mich.
Evelyn T. Walker, R. N., Monmouth County Organization for Social Service, Inc., Red Bank, N. J.
C. E. Waller, M. D., United States Public Health Service, Washington, D. C.
Edward A. Ward, M. D., American Osteopathic Association, Saginaw, Mich.
William H. F. Warthen, M. D., Baltimore Health Department, Baltimore, Md.
Edwin R. Watson, M. D., State Department of Health, Atlanta, Ga.
Mrs. Roy C. F. Weagly, Associated Women of the American Farm Bureau Federation, Hagerstown, Md.
C. H. Webb, M. D., State Pediatric Society, Shreveport, La.
Virginia E. Webb, M. D., State Board of Health, New Orleans, La.
Alice J. Webber, Social Security Board, New York City.
Annie D. Wells, Women's Medical College Hospital, Philadelphia, Pa.

Mrs. George A. Whinery, Junior League of Grand Rapids, Grand Rapids, Mich.
Dorothy V. Whipple, M. D., Children's Bureau, United States Department of Labor, Washington, D. C.
Earlene White, National Federation of Business and Professional Women's Clubs, Washington, D. C.
Edna N. White, National Council of Parent Education, Detroit, Mich.
L. W. White, M. D., Office of Indian Affairs, United States Department of the Interior, Washington, D. C.
Mrs. John L. Whitehurst, General Federation of Women's Clubs, Baltimore, Md.
A. Barbara Wiegand, National Council of Federated Church Women, Washington, D. C.
Dorothy G. Wiehl, Milbank Memorial Fund, New York City.
Dalya Wildebar, R. N., Visiting Nurse Association of Brooklyn, Brooklyn, N. Y.
D. A. Wilkerson, American Federation of Teachers, Howard University, Washington, D. C.
Faith Williams, American Association of University Women, Bureau of Labor Statistics, United States Department of Labor, Washington, D. C.
Charl Ormond Williams, National Congress of Parents and Teachers, Washington, D. C.
Maysill Williams, M. D., State Department of Public Health, Bismarck, N. Dak.
Philip F. Williams, M. D., American Gynecological Society, American Committee on Maternal Welfare, Commission on Maternal Welfare, Medical Society of the State of Pennsylvania, University of Pennsylvania Medical School, Philadelphia.
W. C. Williams, M. D., State Department of Public Health, Nashville, Tenn.
Mrs. Prentiss Willson, Women's Auxiliary, American Medical Association, Washington, D. C.
Emma Winslow, Children's Bureau, United States Department of Labor, Washington, D. C.
J. M. Wisan, D.D.S., American Dental Association, Elizabeth, N. J.
Margaret C. Wohlgemuth, R. N., County Health Department, Annapolis, Md.
Mrs. Ellen S. Woodward, Works Progress Administration, Washington, D. C.
William C. Woodward, M. D., American Medical Association, Chicago, Ill.
Shirley W. Wynne, M. D., The Children's Welfare Federation of New York City.
Lillie Young, R. N., Brattleboro Mutual Aid Association, Brattleboro, Vt.
Louise Zabriskie, Women's City Club of New York, Children's Welfare Federation of New York City, New York City.
C. Rollin Zane, State Board of Charities, Dover, Del.

Appendix 2.—Factual Material Provided to Members of the Conference [1]

BETTER CARE FOR MOTHERS AND BABIES

A BRIEF SUMMARY OF FACTS

How Many Mothers Die?

12,182 mothers died in 1936 in the United States as a result of pregnancy.

In 1935 the maternal mortality rate was 58 per 10,000 live births; in 1936 it was 57. The decrease of one point from 1935 to 1936 has meant a saving of more than 250 mothers' lives out of a total of more than 2 million women who gave birth to a child in 1936. During the 22 years for which records are available, there has been very little decline in the maternal mortality rate until the past 7 years, during which the decrease, though still slight, has been a significant one. This decline has been largely due to a decrease in deaths from toxemia. It probably reflects improved prenatal care, since toxemia is, of all the causes of maternal death, the one most influenced by prenatal care.

The high maternal mortality rate in the United States constitutes one of the major health problems today. The decrease in these deaths in the past few years has not been commensurate with the advance of modern science and improvement in medical practice. Thousands of these deaths might have been prevented. The steadily declining birth rate makes this loss of life of even greater significance. There were 2,144,790 babies born alive in the United States in 1936. There were 10,315 fewer live births registered in 1936 than in 1935.

Why Mothers Die.

In 1936—

4,606 (38 percent of the mothers who died) died from septicemia (infection). More than one-third of these (1,801) died following abortions with infection. Infection may be prevented by proper care before and especially at time of childbirth.

2,481 (20 percent of all maternal deaths) died following abortions. The public must be taught the dangers of abortions if these deaths are to be prevented.

2,784 (23 percent) died from toxemia, a toxic condition of the mother. Toxemia may be prevented by proper care during pregnancy.

1,398 (11 percent) died from hemorrhage. Some of these deaths may be prevented through better facilities for emergency care and blood transfusions.

One-half to Two-thirds of the Maternal Deaths Are Preventable.

Obstetric specialists, after careful study of maternal deaths in the following communities, found the estimated percentages of preventable deaths to be as follows:

	Percent
New York Academy of Medicine, 1930–32	66
Philadelphia County Medical Society, 1931–33	57
Maternal mortality in 7 cities on the Pacific Coast, 1933–34	68
Jefferson County, Ala., 1931–35	79

[1] Material based on figures for 1936, which became available shortly after the conference, has been substituted where possible for 1935 material.

How Many Babies Die?

73,735 babies were born dead in 1936.

69,869 babies died in the first month of life in 1936; 46 percent of these were born prematurely and 14 percent were injured at birth.

56,686 babies (81 percent) died as a result of causes arising during pregnancy or at the time of delivery.

During the 22 years for which records are available, the total infant mortality rate (deaths under 1 year of age per 1,000 live births) has decreased notably, from 100 in 1915 to 57 in 1936. Since 1932, however, there has been no significant change.

On the other hand, the neonatal mortality (deaths under 1 month) has decreased but slightly and deaths on the first day of life have not been reduced at all. In 1936 the mortality rate in the first month of life was 33 per 1,000 live births. Nearly half the deaths in the first month of life are due to premature birth.

Competent medical and nursing care during pregnancy, adequate care at the time of childbirth, treatment of syphilitic mothers, care of newborn babies—especially care for babies prematurely born—and facilities for hospital care when necessary would materially reduce these deaths.

It has been demonstrated in both cities and rural areas that the deaths of infants in the first month of life can be cut in half. Through education and preventive medicine the number of babies who die from the second to the twelfth month of life has been materially reduced.

How Many Mothers Have Adequate Prenatal Care?

Mortality studies.—In the Children's Bureau maternal-mortality study in 15 States, covering 26 percent of total maternal deaths in the United States, 1927–28, it was found that where prenatal care was reported and applicable—

Less than 1 percent of the mothers who died in the last 6 months of pregnancy had received medical care which was considered adequate.

54 percent had no prenatal care by a physician.

87 percent had no prenatal care, or poor or indifferent care.

40 percent of the women who died in cities or small towns had no prenatal care; 64 percent of the women who died in the country had no prenatal care.

In the New York study 62 percent had no prenatal care or inadequate care.

In the Philadelphia study 68 percent of the mothers who died had no prenatal care or inadequate care (41 percent had no prenatal care).

In the South Carolina study, 1935–36, 94 percent had no prenatal care or inadequate care (81 percent had no prenatal care).

In the Alabama study, 1936, 94 percent of the mothers had no prenatal care or inadequate care.

In a study in Michigan of approximately 10,000 births in 1936, 47 percent had no prenatal care or unsatisfactory care (21 percent had no care).

What Care Is Given at the Time of Childbirth?

223,000 women in 1936 were attended by midwives; 56 percent of the Negro women were attended by midwives; and in 9 States more than 25 percent of the women were attended by midwives.

15,000 women in the United States (exclusive of Massachusetts) had neither midwife nor physician in attendance.

14 percent of the women living in rural areas were delivered in hospitals.

71 percent of the women living in cities and small towns were delivered in hospitals.

In 1937, in response to a Children's Bureau questionnaire, 41 State health officers reported that there were not enough specialists in obstetrics in the State to meet the need.

How Are Hospitals Prepared To Care For Maternity Cases?

In normal cases delivery can be safely carried out in the home unless conditions in the home make it unsuitable for care and home delivery. Abnormal cases and potentially hazardous cases require hospitalization at time of delivery.

Every hospital receiving maternity cases should be registered by the American Medical Association and meet the standards for obstetric care set forth by the American Hospital Association or the American College of Surgeons.

These standards for hospital obstetric care include: Segregation of mothers and newborn infants from all other patients in the institution, with facilities for isolation of all infected cases; adequate clinical laboratory and X-ray facilities for diagnosis and treatment of obstetric patients; supervision by competent registered nurse with special obstetric training and sufficient number of assistants; an obstetrician as chief of service; adequate records; consultation before operative interference; monthly study of cases; training for nurses, with proper nursing care of newborn infants.

The Council on Medical Education and Hospitals of the American Medical Association reported in June 1937 that 3,612 hospitals in the United States were not approved by the council nor by the American College of Surgeons; 581 are not registered by the American Medical Association.

Do Physicians Have Opportunity for Sufficient Training in Obstetrics?

"The teaching of obstetrics is at a lower level than that of the other major clinical departments. Comparatively few schools offer to their students an adequate practical experience under competent supervision." Council on Medical Education and Hospitals, American Medical Association, June 1937.

Approximately 5,000 students are graduated from medical schools each year. Only 287 positions were listed in the Journal of the American Medical Association, March 1937, which offer a minimum of 1 year's postgraduate experience in obstetrics in approved hospitals.

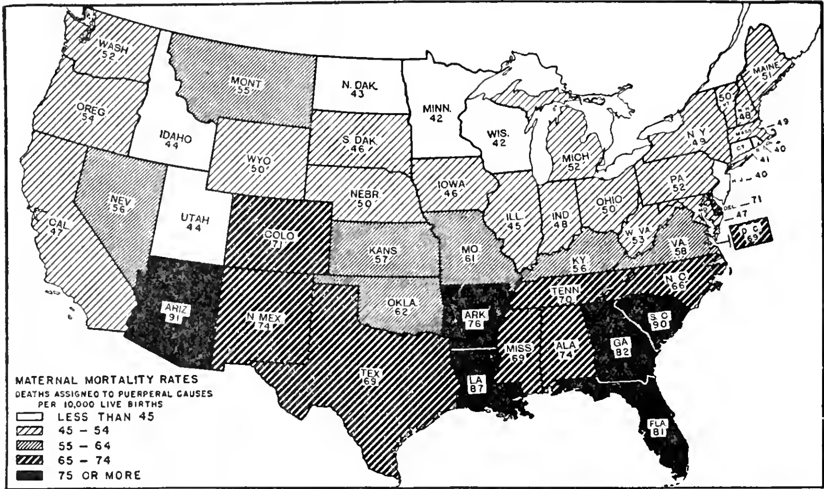
The quality and quantity of obstetric teaching must be improved and hospital facilities for postgraduate training extended.

Maternal, infant, and neonatal deaths, and stillbirths; United States, 1936

State	Maternal deaths		Infant deaths (under 1 year)		Neonatal deaths (under 1 month)		Stillbirths	
	Number	Rate per 10,000 live births	Number	Rate per 1,000 live births	Number	Rate per 1,000 live births	Number	Rate per 1,000 live births
United States	12,182	57	122,535	57	69,869	33	73,735	34
Alabama	446	74	4,017	67	2,390	40	2,659	44
Arizona	87	91	1,142	120	436	46	277	29
Arkansas	254	76	1,707	51	822	25	1,274	38
California	393	47	4,489	53	2,419	29	2,000	24
Colorado	129	71	1,354	74	675	37	553	30
Connecticut	91	41	933	42	629	28	563	25
Delaware	28	71	253	65	121	31	143	36
District of Columbia	81	69	847	72	470	40	432	37
Florida	227	81	1,669	59	1,046	37	1,388	49
Georgia	505	82	4,314	70	2,491	40	3,648	59
Idaho	45	44	526	51	323	32	253	25
Illinois	500	45	5,246	47	3,315	30	3,099	28
Indiana	261	48	2,742	51	1,637	30	1,286	24
Iowa	198	46	2,057	48	1,376	32	1,156	27
Kansas	170	57	1,554	52	952	32	785	26
Kentucky	315	56	3,726	67	1,897	34	2,029	36
Louisiana	382	87	3,151	72	1,703	39	2,079	47
Maine	78	51	981	64	580	38	472	31
Maryland	125	47	1,838	69	871	33	1,291	49
Massachusetts	304	49	2,872	47	1,818	29	1,820	29
Michigan	462	52	4,482	51	2,648	30	2,650	30
Minnesota	200	42	2,113	44	1,406	30	1,247	26
Mississippi	343	69	2,879	58	1,485	30	2,348	47
Missouri	342	61	3,235	58	1,792	32	2,013	36
Montana	57	55	593	57	335	32	227	22
Nebraska	120	50	1,049	44	663	28	529	22
Nevada	8	56	99	70	55	39	31	22
New Hampshire	37	48	355	46	229	30	228	30
New Jersey	215	40	2,386	44	1,453	27	1,801	33
New Mexico	96	74	1,572	122	617	48	407	32
New York	894	49	8,567	47	5,401	30	7,221	40
North Carolina	502	66	5,247	69	2,732	36	3,116	41
North Dakota	58	43	674	50	397	29	366	27
Ohio	516	50	5,314	51	3,203	31	3,088	30
Oklahoma	259	62	2,509	60	1,368	33	1,182	28
Oregon	76	54	619	44	406	29	297	21
Pennsylvania	830	52	8,153	51	4,971	31	5,034	32
Rhode Island	41	40	491	48	308	30	302	30
South Carolina	354	90	3,174	81	1,660	42	2,286	58
South Dakota	59	46	615	48	358	28	267	21
Tennessee	353	70	3,464	68	1,764	35	1,969	39
Texas	771	69	7,951	71	4,140	37	3,905	35
Utah	55	44	661	53	408	33	255	20
Vermont	32	50	374	58	230	36	183	28
Virginia	299	58	3,787	74	2,042	40	2,235	44
Washington	122	52	1,062	45	647	28	468	20
West Virginia	216	53	2,908	71	1,446	35	1,524	37
Wisconsin	222	42	2,510	48	1,575	30	1,281	24
Wyoming	24	50	274	58	159	33	68	14

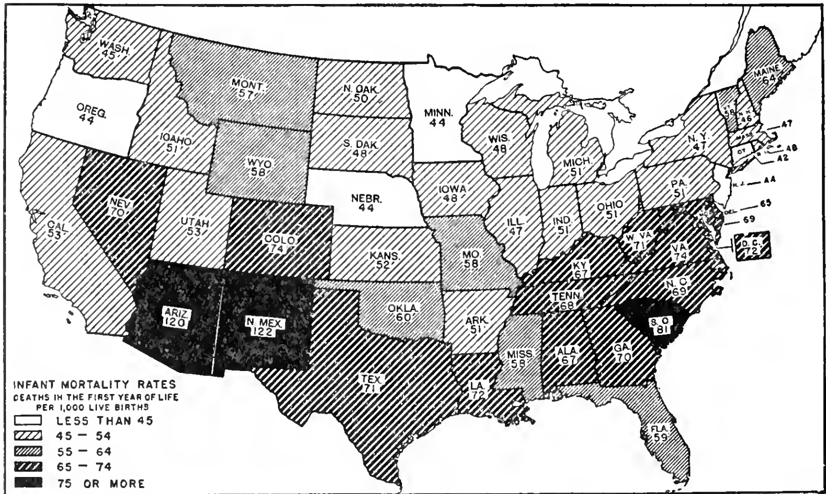
Compiled from reports of the U. S. Bureau of the Census.

MATERNAL MORTALITY IN THE UNITED STATES, 1936



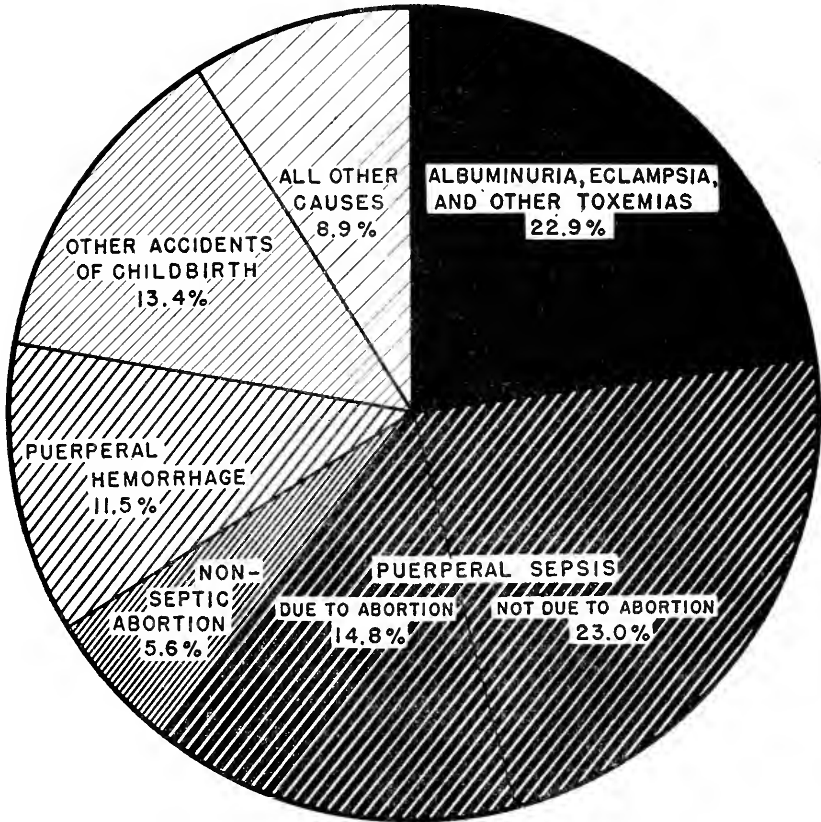
CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR

INFANT MORTALITY IN THE UNITED STATES, 1936



CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR

CAUSES OF MATERNAL MORTALITY
UNITED STATES, 1936



CHILDREN'S BUREAU
U. S. DEPARTMENT OF LABOR

SOURCE: REPORTS OF U. S. BUREAU OF THE CENSUS

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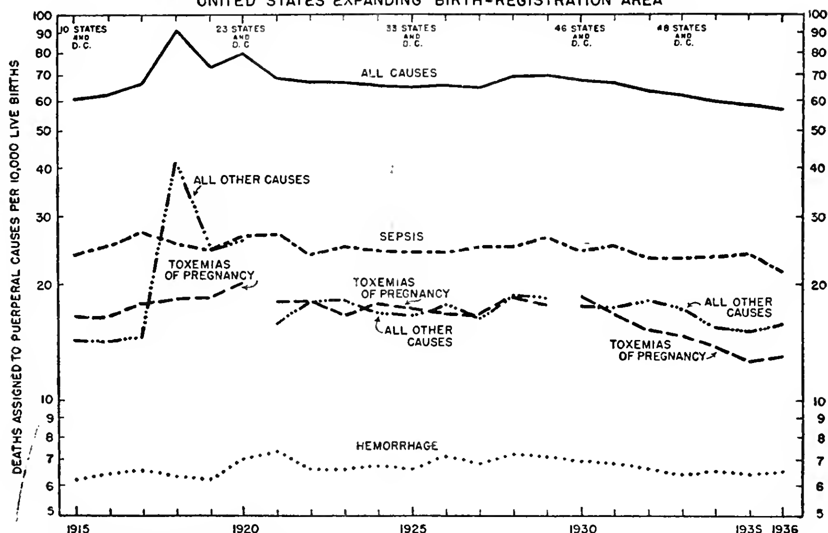
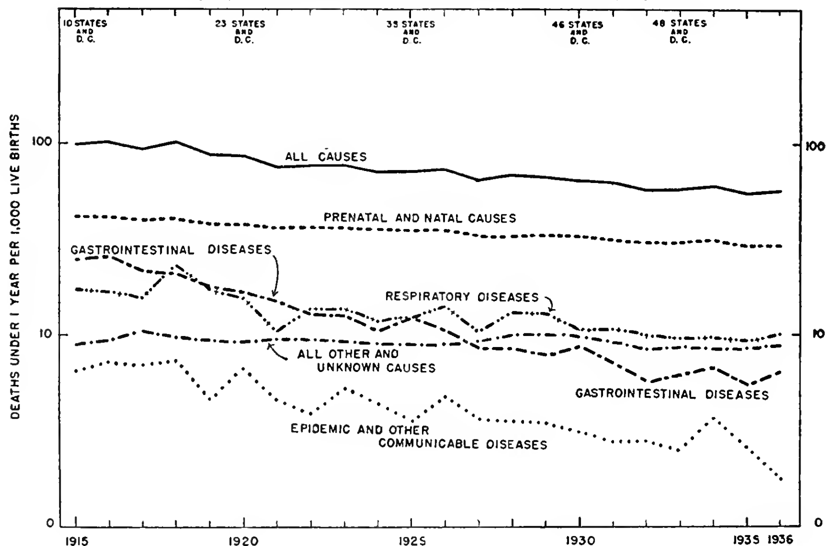
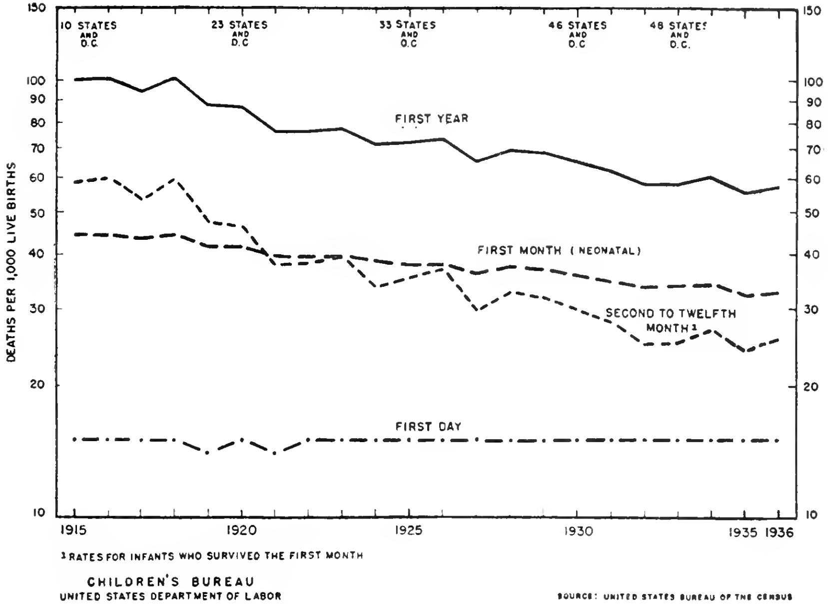
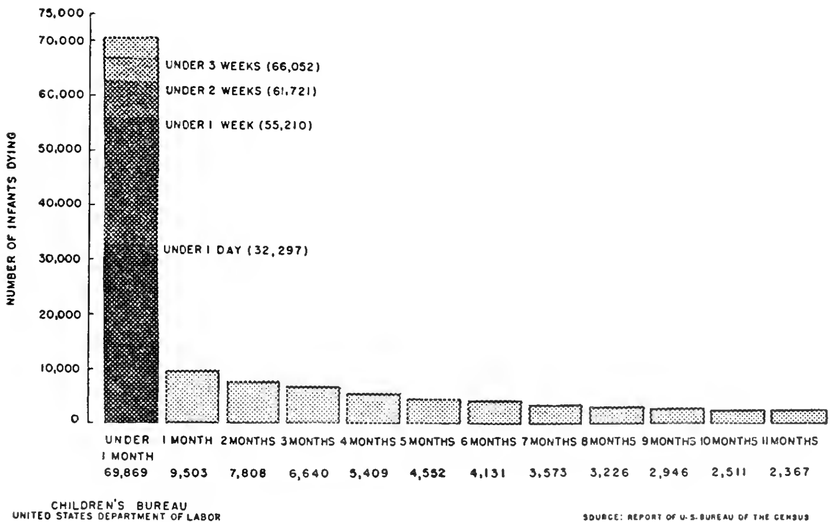
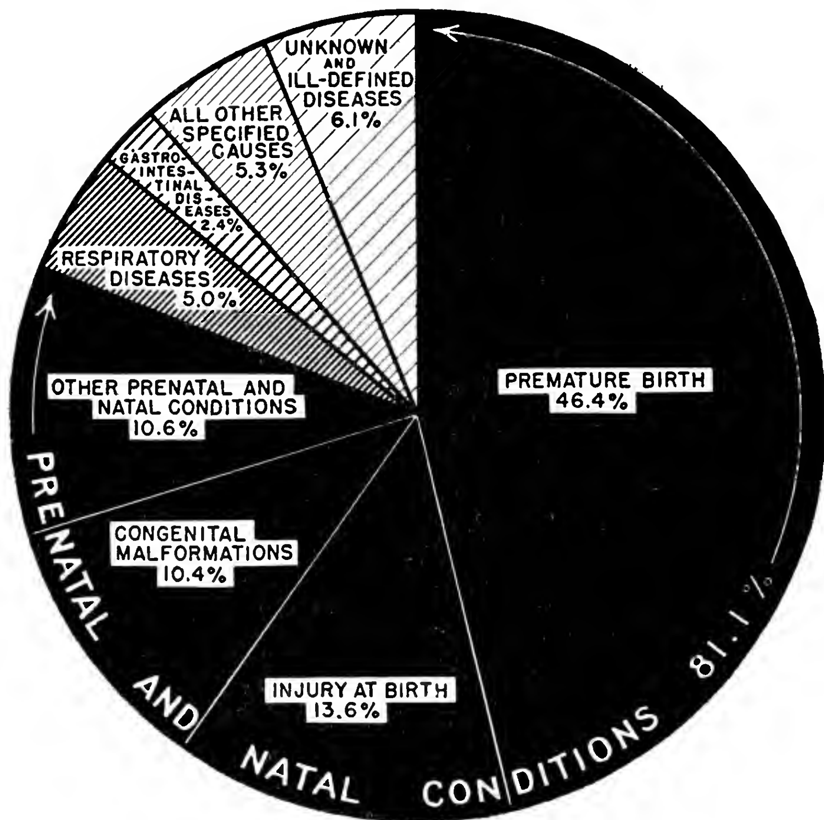

MATERNAL MORTALITY, BY CAUSE, 1915–36
UNITED STATES EXPANDING BIRTH-REGISTRATION AREA
DEATHS ASSIGNED TO PUERPERAL CAUSES PER 10,000 LIVE BIRTHS
10 STATES AND D.C.
23 STATES AND D.C.
33 STATES AND D.C.
46 STATES AND D.C.
48 STATES AND D.C.
ALL CAUSES
ALL OTHER CAUSES
SEPSIS
TOXEMIAS OF PREGNANCY
TOXEMIAS OF PREGNANCY
ALL OTHER CAUSES
ALL OTHER CAUSES
TOXEMIAS OF PREGNANCY
HEMORRHAGE
1915
1920
1925
1930
1935
1936
NOTE.—BREAKS IN LINES ARE DUE TO CHANGES IN THE CONDITIONS INCLUDED IN THE INTERNATIONAL LIST TITLES
CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR
SOURCE: UNITED STATES BUREAU OF THE CENSUS


INFANT MORTALITY, BY CAUSE, 1915–36
UNITED STATES EXPANDING BIRTH-REGISTRATION AREA
DEATHS UNDER 1 YEAR PER 1,000 LIVE BIRTHS
10 STATES AND D.C.
23 STATES AND D.C.
33 STATES AND D.C.
46 STATES AND D.C.
48 STATES AND D.C.
ALL CAUSES
PRENATAL AND NATAL CAUSES
GASTROINTESTINAL DISEASES
RESPIRATORY DISEASES
ALL OTHER AND UNKNOWN CAUSES
GASTROINTESTINAL DISEASES
EPIDEMIC AND OTHER COMMUNICABLE DISEASES
1915
1920
1925
1930
1935
1936
CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR
SOURCE: UNITED STATES BUREAU OF THE CENSUS


INFANT MORTALITY—
CERTAIN PERIODS OF THE FIRST YEAR OF LIFE, 1915—36
UNITED STATES EXPANDING BIRTH-REGISTRATION AREA
10 STATES AND D.C.
23 STATES AND D.C
33 STATES AND D.C
46 STATES AND D.C
48 STATES AND D.C.
FIRST YEAR
FIRST MONTH (NEONATAL)
SECOND TO TWELFTH MONTH[1]
FIRST DAY
DEATHS PER 1,000 LIVE BIRTHS
150
100
90
80
70
60
50
40
30
20
10
1915
1920
1925
1930
1935 1936
[1] RATES FOR INFANTS WHO SURVIVED THE FIRST MONTH
CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR
SOURCE: UNITED STATES BUREAU OF THE CENSUS


INFANTS DYING IN EACH MONTH OF LIFE; UNITED STATES, 1936
(AGE AT DEATH)
NUMBER OF INFANTS DYING
75,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
UNDER 3 WEEKS (66,052)
UNDER 2 WEEKS (61,721)
UNDER 1 WEEK (55,210)
UNDER 1 DAY (32,297)
UNDER 1 MONTH 69,869
1 MONTH 9,503
2 MONTHS 7,808
3 MONTHS 6,640
4 MONTHS 5,409
5 MONTHS 4,552
6 MONTHS 4,131
7 MONTHS 3,573
8 MONTHS 3,226
9 MONTHS 2,946
10 MONTHS 2,511
11 MONTHS 2,367
CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR
SOURCE: REPORT OF U.S. BUREAU OF THE CENSUS

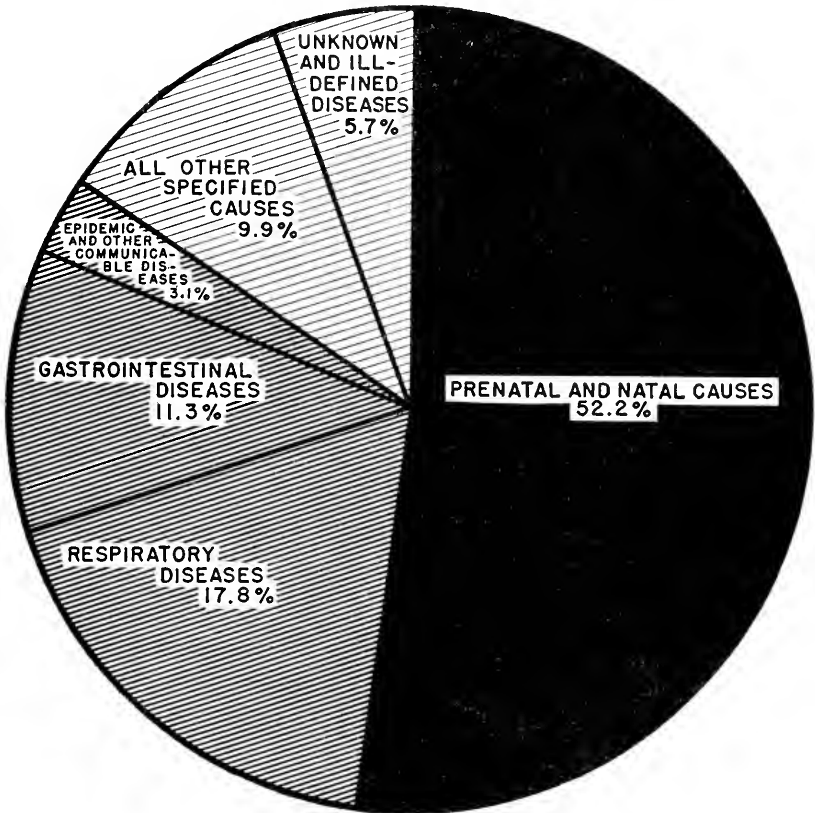
CAUSES OF NEONATAL MORTALITY
UNITED STATES, 1936



CHILDREN'S BUREAU
U. S. DEPARTMENT OF LABOR

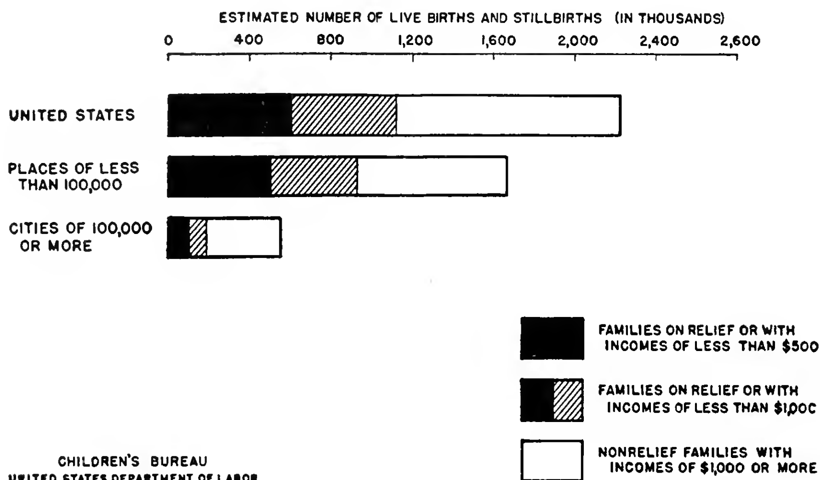
SOURCE: REPORTS OF U. S. BUREAU OF THE CENSUS

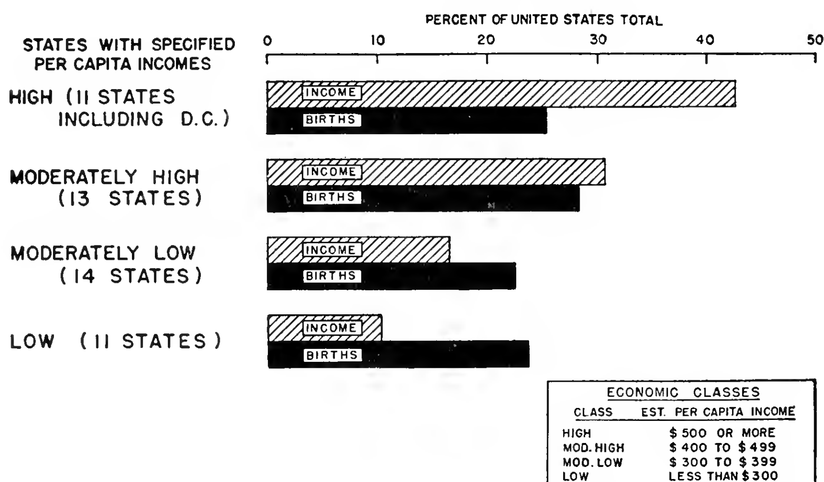
CAUSES OF INFANT MORTALITY
UNITED STATES, 1936



CHILDREN'S BUREAU
U. S. DEPARTMENT OF LABOR

SOURCE: REPORTS OF U. S. BUREAU OF THE CENSUS


NUMBER OF BIRTHS IN FAMILIES ON RELIEF OR WITH SPECIFIED INCOMES; UNITED STATES, 1935
ESTIMATED NUMBER OF LIVE BIRTHS AND STILLBIRTHS (IN THOUSANDS)
0
400
800
1,200
1,600
2,000
2,400
2,600
UNITED STATES
PLACES OF LESS THAN 100,000
CITIES OF 100,000 OR MORE
FAMILIES ON RELIEF OR WITH INCOMES OF LESS THAN $500
FAMILIES ON RELIEF OR WITH INCOMES OF LESS THAN $1,000
NONRELIEF FAMILIES WITH INCOMES OF $1,000 OR MORE
CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR


DISTRIBUTION OF INCOME COMPARED WITH DISTRIBUTION OF LIVE BIRTHS, BY ECONOMIC CLASSES OF STATES; UNITED STATES, 1935
PERCENT OF UNITED STATES TOTAL
STATES WITH SPECIFIED PER CAPITA INCOMES
0
10
20
30
40
50
HIGH (11 STATES INCLUDING D.C.)
MODERATELY HIGH (13 STATES)
MODERATELY LOW (14 STATES)
LOW (11 STATES)
INCOME
BIRTHS
ECONOMIC CLASSES
CLASS
EST. PER CAPITA INCOME
HIGH $500 OR MORE
MOD. HIGH $400 TO $499
MOD. LOW $300 TO $399
LOW LESS THAN $300
CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR
SOURCES: NATIONAL INDUSTRIAL CONFERENCE BOARD INCOME DATA
UNITED STATES BUREAU OF THE CENSUS

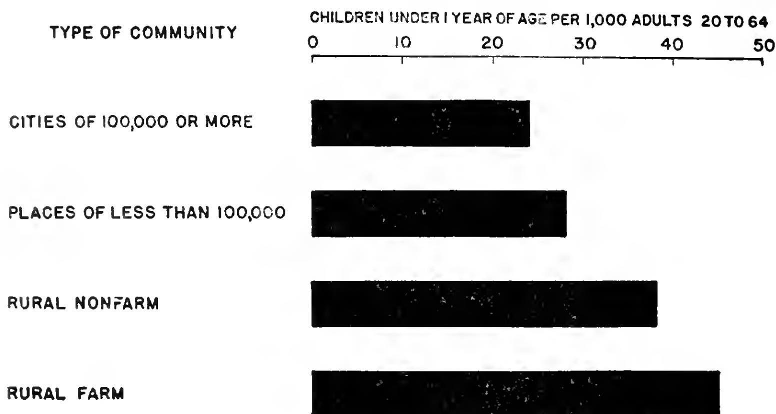
NUMBER OF LIVE BIRTHS PER 1,000 ADULTS 20 TO 64 YEARS OF AGE, BY STATES, 1930

LIVE-BIRTH DATA FOR SOUTH DAKOTA AND TEXAS REPRESENT YEARS 1932 AND 1933, RESPECTIVELY

CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR

SOURCE: U. S. BUREAU OF THE CENSUS

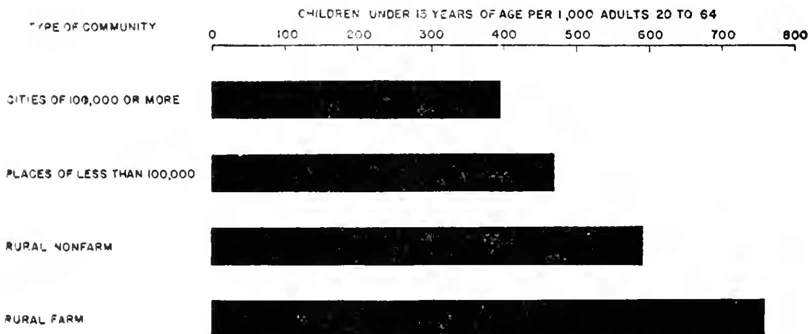
RATIO OF INFANTS TO ADULTS, BY TYPE OF COMMUNITY, 1930



CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR

SOURCE: UNITED STATES BUREAU OF THE CENSUS

RATIO OF CHILDREN TO ADULTS, BY TYPE OF COMMUNITY, 1930



CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR

SOURCE: UNITED STATES BUREAU OF THE CENSUS

NUMBER OF CHILDREN UNDER 15 PER 1,000 ADULTS 20 TO 64 YEARS OF AGE, BY STATES, 1930

CHILDREN'S BUREAU
UNITED STATES DEPARTMENT OF LABOR

SOURCE: U. S. BUREAU OF THE CENSUS

Number of live births and percentage distribution by person in attendance, in urban and rural areas of each State, 1936 [1]

Area	Number					Percent				
	Total live births	Physician (in hospital)	Physician (not in hospital)	Midwife	Other and unspecified	Total percent	Physician (in hospital)	Physician (not in hospital)	Midwife	Other and unspecified
United States	2, 144, 790	878, 222	1, 014, 700	223, 577	28, 291	100. 0	40. 9	47. 3	10. 4	1. 3
Urban	1, 012, 957	723, 893	248, 545	29, 569	10, 950	100. 0	71. 5	24. 5	2. 9	1. 1
Rural	1, 131, 833	154, 329	766, 155	194, 008	17, 341	100. 0	13. 6	67. 7	17. 1	1. 5
Alabama	60, 116	6, 868	31, 030	21, 996	222	100. 0	11. 4	51. 6	36. 6	. 4
Urban	11, 374	6, 067	3, 963	1, 330	14	100. 0	53. 3	34. 8	11. 7	. 1
Rural	48, 742	801	27, 067	20, 666	208	100. 0	1. 6	55. 5	42. 4	. 4
Arizona	9, 545	3, 230	5, 000	828	487	100. 0	33. 8	52. 4	8. 7	5. 1
Urban	3, 181	1, 825	1, 191	133	32	100. 0	57. 4	37. 4	4. 2	1. 0
Rural	6, 364	1, 405	3, 809	695	455	100. 0	22. 1	59. 9	10. 9	7. 1
Arkansas	33, 520	2, 340	21, 416	8, 598	1, 166	100. 0	7. 0	63. 9	25. 7	3. 5
Urban	3, 563	1, 637	1, 666	239	21	100. 0	45. 9	46. 8	6. 7	. 6
Rural	29, 957	703	19, 750	8, 359	1, 145	100. 0	2. 3	65. 9	27. 9	3. 8
California	84, 502	63, 172	19, 601	1, 217	512	100. 0	74. 8	23. 2	1. 4	. 6
Urban	53, 287	44, 242	7, 925	958	162	100. 0	83. 0	14. 9	1. 8	. 3
Rural	31, 215	18, 930	11, 676	259	350	100. 0	60. 6	37. 4	. 8	1. 1
Colorado	18, 279	8, 017	9, 854	177	231	100. 0	43. 9	53. 9	1. 0	1. 3
Urban	8, 097	5, 593	2, 394	85	25	100. 0	69. 1	29. 6	1. 0	. 3
Rural	10, 182	2, 424	7, 460	92	206	100. 0	23. 8	73. 3	. 9	2. 0
Connecticut	22, 228	17, 545	4, 271	376	36	100. 0	78. 9	19. 2	1. 7	. 2
Urban	18, 813	15, 838	2, 603	347	25	100. 0	84. 2	13. 8	1. 8	. 1
Rural	3, 415	1, 707	1, 668	29	11	100. 0	50. 0	48. 8	. 8	. 3
Delaware	3, 922	2, 028	1, 305	576	13	100. 0	51. 7	33. 3	14. 7	. 3
Urban	2, 159	1, 713	304	142	------	100. 0	79. 3	14. 1	6. 6	------
Rural	1, 763	315	1, 001	434	13	100. 0	17. 9	56. 8	24. 6	. 7
District of Columbia	11, 704	10, 387	1, 309	8	------	100. 0	88. 7	11. 2	. 1	------
Florida	28, 097	8, 237	11, 359	8, 223	278	100. 0	29. 3	40. 4	29. 3	1. 0
Urban	10, 733	6, 374	2, 357	1, 986	16	100. 0	59. 4	22. 0	18. 5	. 1
Rural	17, 364	1, 863	9, 002	6, 237	262	100. 0	10. 7	51. 8	35. 9	1. 5
Georgia	61, 658	9, 638	27, 203	24, 692	125	100. 0	15. 6	44. 1	40. 0	. 2
Urban	13, 935	8, 251	4, 009	1, 668	7	100. 0	59. 2	28. 8	12. 0	. 1
Rural	47, 723	1, 387	23, 194	23, 024	118	100. 0	2. 9	48. 6	48. 2	. 2
Idaho	10, 224	4, 355	5, 756	62	51	100. 0	42. 6	56. 3	. 6	. 5
Urban	1, 492	1, 327	161	2	2	100. 0	88. 9	10. 8	. 1	. 1
Rural	8, 732	3, 028	5, 595	60	49	100. 0	34. 7	64. 1	. 7	. 6
Illinois	112, 167	68, 067	42, 568	1, 401	131	100. 0	60. 7	38. 0	1. 2	. 1
Urban	76, 988	60, 846	14, 942	1, 139	61	100. 0	79. 0	19. 4	1. 5	. 1
Rural	35, 179	7, 221	27, 626	262	70	100. 0	20. 5	78. 5	. 7	. 2
Indiana	54, 034	18, 457	35, 234	293	50	100. 0	34. 2	65. 2	. 5	. 1
Urban	26, 884	14, 870	11, 723	279	12	100. 0	55. 3	43. 6	1. 0	[2]
Rural	27, 150	3, 587	23, 511	14	38	100. 0	13. 2	86. 6	. 1	. 1
Iowa	42, 715	16, 938	25, 709	37	31	100. 0	39. 7	60. 2	. 1	. 1
Urban	16, 387	12, 195	4, 178	10	4	100. 0	74. 4	25. 5	. 1	[2]
Rural	26, 328	4, 743	21, 531	27	27	100. 0	18. 0	81. 8	. 1	. 1
Kansas	29, 998	10, 784	19, 073	70	71	100. 0	35. 9	63. 6	. 2	. 2
Urban	10, 695	6, 746	3, 902	27	20	100. 0	63. 1	36. 5	. 3	. 2
Rural	19, 303	4, 038	15, 171	43	51	100. 0	20. 9	78. 6	. 2	. 3
Kentucky	55, 778	5, 578	38, 424	11, 607	169	100. 0	10. 0	68. 9	20. 8	. 3
Urban	10, 498	4, 698	5, 690	105	5	100. 0	44. 8	54. 2	1. 0	[2]
Rural	45, 280	880	32, 734	11, 502	164	100. 0	1. 9	72. 3	25. 4	. 4
Louisiana	43, 828	11, 127	15, 322	17, 329	50	100. 0	25. 4	35. 0	39. 5	. 1
Urban	14, 356	10, 149	2, 430	1, 771	6	100. 0	70. 7	16. 9	12. 3	[2]
Rural	29, 472	978	12, 892	15, 558	44	100. 0	3. 3	43. 7	52. 8	. 1
Maine	15, 302	5, 025	10, 275	1	1	100. 0	32. 8	67. 1	[2]	[2]
Urban	4, 850	3, 123	1, 727	------	------	100. 0	64. 4	35. 6	------	------
Rural	10, 452	1, 902	8, 548	1	1	100. 0	18. 2	81. 8	[2]	[2]
Maryland	26, 588	11, 682	12, 437	2, 355	114	100. 0	43. 9	46. 8	8. 9	. 4
Urban	15, 803	10, 311	4, 937	549	6	100. 0	65. 2	31. 2	3. 5	[2]
Rural	10, 785	1, 371	7, 500	1, 806	108	100. 0	12. 7	69. 5	16. 7	1. 0
Massachusetts	61, 704	44, 771	3, 668	4	[3] 13, 261	100. 0	72. 6	5. 9	[2]	21. 5
Urban	55, 787	42, 594	3, 668	4	9, 521	100. 0	76. 4	6. 6	[2]	17. 1
Rural	5, 917	2, 177	------	------	3, 740	100. 0	36. 8	------	------	63. 2
Michigan	88, 427	38, 896	48, 576	702	253	100. 0	44. 0	54. 9	. 8	. 3
Urban	56, 474	33, 685	22, 511	193	85	100. 0	59. 6	39. 9	. 3	. 2
Rural	31, 953	5, 211	26, 065	509	168	100. 0	16. 3	81. 6	1. 6	. 5
Minnesota	47, 576	24, 606	21, 394	609	967	100. 0	51. 7	45. 0	1. 3	2. 0
Urban	19, 043	16, 622	2, 268	133	20	100. 0	87. 3	11. 9	. 7	. 1
Rural	28, 533	7, 984	19, 126	476	947	100 0	28. 0	67. 0	1. 7	3. 3

[1] From Vital Statistics—Special Reports, vol. 5, No. 4, pp. 11-14. U. S. Bureau of the Census, Washington, D. C.
[2] Less than 1/10 of 1 percent.
[3] Person in attendance not stated on transcript.

Number of live births and percentage distribution by person in attendance, in urban and rural areas of each State, 1936—Continued

Area	Number					Percent				
	Total live births	Physician (in hospital)	Physician (not in hospital)	Midwife	Other and unspecified	Total percent	Physician (in hospital)	Physician (not in hospital)	Midwife	Other and unspecified
Mississippi	49,446	3,455	20,626	25,049	316	100.0	7.0	41.7	50.7	0.6
Urban	4,999	2,270	1,441	1,280	8	100.0	45.4	28.8	25.6	.2
Rural	44,447	1,185	19,185	23.769	308	100.0	2.7	43.2	53.5	.7
Missouri	55,916	19,752	33,777	1,329	1,058	100.0	35.3	60.4	2.4	1.9
Urban	24,208	17,680	5,993	503	32	100.0	73.0	24.8	2.1	.1
Rural	31,708	2,072	27,784	826	1,026	100.0	6.5	87.6	2.6	3.2
Montana	10,400	6,133	3,883	253	131	100.0	39.0	37.3	2.4	1.3
Urban	3,275	2,988	276	10	1	100.0	91.2	8.4	.3	(2)
Rural	7,125	3,145	3,607	243	130	100.0	44.1	50.6	3.4	1.8
Nebraska	23,798	8,339	15,387	23	49	100.0	35.0	64.7	.1	.2
Urban	7,584	5,574	1,994	16		100.0	73.5	26.3	.2	
Rural	16,214	2,765	13,393	7	49	100.0	17.1	82.6	(2)	.3
Nevada	1,419	863	525	11	20	100.0	60.8	37.0	.8	1.4
Urban	220	200	16	1	3	100.0	90.9	7.3	.5	1.4
Rural	1,199	663	509	10	17	100.0	55.3	42.5	.8	1.4
New Hampshire	7,679	2,270	5,381	11	17	100.0	29.6	70.1	.1	.2
Urban	4,337	1,515	2,818	1	3	100.0	34.9	65.0	(2)	.1
Rural	3,342	755	2,563	10	14	100.0	22.6	76.7	.3	.4
New Jersey	53,833	37,563	13,065	3,169	36	100.0	69.8	24.3	5.9	.1
Urban	43,444	34,044	6,760	2,628	12	100.0	78.4	15.6	6.0	(2)
Rural	10,389	3,519	6,305	541	24	100.0	33.9	60.7	5.2	.2
New Mexico	12,907	1,941	6,437	3,140	1,389	100.0	15.0	49.9	24.3	10.8
Urban	1,732	770	813	134	15	100.0	44.5	46.9	7.7	.9
Rural	11,175	1,171	5,624	3,006	1,374	100.0	10.5	50.3	26.9	12.3
New York	182,469	139,912	38,491	3,819	247	100.0	76.7	21.1	2.1	.1
Urban	151,127	127,829	19,650	3,582	66	100.0	84.6	13.0	2.4	(2)
Rural	31,342	12,083	18,841	237	181	100.0	38.6	60.1	.8	.6
North Carolina	76,182	10,211	44,277	21,536	158	100.0	13.4	58.1	28.3	.2
Urban	13,898	6,743	5,504	1,645	6	100.0	48.5	39.6	11.8	(2)
Rural	62,284	3,468	38,773	19,891	152	100.0	5.6	62.3	31.9	.2
North Dakota	13,571	4,842	7,264	215	1,250	100.0	35.7	53.5	1.6	9.2
Urban	2,593	2,145	445		3	100.0	82.7	17.2		.1
Rural	10,978	2,697	6,819	215	1,247	100.0	24.6	62.1	2.0	11.4
Ohio	103,703	46,170	57,382	122	29	100.0	44.5	55.3	.1	(2)
Urban	65,356	42,763	22,487	99	7	100.0	65.4	34.4	.2	(2)
Rural	38,347	3,407	34,895	23	22	100.0	8.9	91.0	.1	.1
Oklahoma	41,815	9,222	30,782	1,452	359	100.0	22.1	73.6	3.5	.9
Urban	11,101	6,613	4,339	140	9	100.0	59.6	39.1	1.3	.1
Rural	30,714	2,609	26,443	1,312	350	100.0	8.5	86.1	4.3	1.1
Oregon	13,975	9,258	4,656	26	35	100.0	66.2	33.3	.2	.3
Urban	6,652	6,046	591	9	6	100.0	90.9	8.9	.1	.1
Rural	7,323	3,212	4,065	17	29	100.0	43.9	55.5	.2	.4
Pennsylvania	159,393	72,742	84,710	1,507	434	100.0	45.6	53.1	.9	.3
Urban	90,126	60,586	28,368	907	265	100.0	67.2	31.5	1.0	.3
Rural	69,267	12,156	56,342	600	169	100.0	17.5	81.3	.9	.2
Rhode Island	10,186	6,392	3,563	211	20	100.0	62.8	35.0	2.1	.2
Urban	9,416	6,242	3,002	159	13	100.0	66.3	31.9	1.7	.1
Rural	770	150	561	52	7	100.0	19.5	72.9	6.8	.9
South Carolina	39,292	3,725	16,472	19,069	26	100.0	9.5	41.9	48.5	.1
Urban	5,544	2,666	2,147	727	4	100.0	48.1	38.7	13.1	.1
Rural	33,748	1,059	14,325	18,342	22	100.0	3.1	42.4	54.3	.1
South Dakota	12,879	4,595	7,647	182	455	100.0	35.7	59.4	1.4	3.5
Urban	2,724	2,060	663		1	100.0	75.6	24.3		(2)
Rural	10,155	2,535	6,984	182	454	100.0	25.0	68.8	1.8	4.5
Tennessee	50,571	9,507	34,050	6,531	483	100.0	18.8	67.3	12.9	1.0
Urban	13,886	8,520	5,095	186	85	100.0	61.4	36.7	1.3	.6
Rural	36,685	987	28,955	6,345	398	100.0	2.7	78.9	17.3	1.1
Texas	111,602	28,392	63,643	17,661	1,906	100.0	25.4	57.0	15.8	1.7
Urban	38,261	22,143	11,145	4,683	290	100.0	57.9	29.1	12.2	.8
Rural	73,341	6,249	52,498	12,978	1,616	100.0	8.5	71.6	17.7	2.2
Utah	12,551	6,119	6,222	148	62	100.0	48.8	49.6	1.2	.5
Urban	5,200	4,080	1,118	2		100.0	78.5	21.5	(2)	
Rural	7,351	2,039	5,104	146	62	100.0	27.7	69.4	2.0	.8
Vermont	6,449	2,563	3,868	2	16	100.0	39.7	60.0	(2)	.2
Urban	1,537	1,211	326			100.0	78.8	21.2		
Rural	4,912	1,352	3,542	2	16	100.0	27.5	72.1	(2)	.3
Virginia	51,247	9,119	27,793	13,621	714	100.0	17.8	54.2	26.6	1.4
Urban	11,999	6,614	3,868	1,473	44	100.0	55.1	32.2	12.3	.4
Rural	39,248	2,505	23,925	12,148	670	100.0	6.4	61.0	31.0	1.7

[2] Less than $\frac{1}{10}$ of 1 percent.

Number of live births and percentage distribution by person in attendance, in urban and rural areas of each State, 1936—Continued

Area	Number					Percent				
	Total live births	Physician (in hospital)	Physician (not in hospital)	Midwife	Other and unspecified	Total percent	Physician (in hospital)	Physician (not in hospital)	Midwife	Other and unspecified
Washington	23, 376	16, 247	6, 855	171	103	100. 0	69. 5	29. 3	0. 7	0. 4
Urban	14, 801	12, 901	1, 790	102	8	100. 0	87. 2	12. 1	. 7	. 1
Rural	8, 575	3, 346	5, 065	69	95	100. 0	39. 0	59. 1	. 8	1. 1
West Virginia	40, 853	4, 296	33, 353	2, 679	525	100. 0	10. 5	81. 6	6. 6	1. 3
Urban	7, 440	3, 359	4, 020	46	15	100. 0	45. 1	54. 0	. 6	. 2
Rural	33, 413	937	29, 333	2, 633	510	100. 0	2. 8	87. 8	7. 9	1. 5
Wisconsin	52, 613	22. 830	29, 135	459	189	100. 0	43. 4	55. 4	. 9	. 4
Urban	24, 616	17, 238	7, 244	126	8	100. 0	70. 0	29. 4	. 5	(2)
Rural	27, 997	5, 592	21, 891	333	181	100. 0	20. 0	78. 2	1. 2	. 6
Wyoming	4, 753	16	4, 672	20	45	100. 0	. 3	98. 3	. 4	. 9
Urban	778	--------	774	2	2	100. 0	--------	99. 5	. 3	. 3
Rural	3, 975	16	3, 898	18	43	100. 0	. 4	98. 1	. 5	1. 1

[2] Less than $\frac{1}{10}$ of 1 percent.

Appendix 3.—Text of Sections of the Social Security Act Relating to Grants to States for Maternal and Child-Health Services

Title V.—GRANTS TO STATES FOR MATERNAL AND CHILD WELFARE

Part 1.—Maternal and Child-Health Services

APPROPRIATION

SECTION 501. For the purpose of enabling each State to extend and improve, as far as practicable under the conditions in such State, services for promoting the health of mothers and children, especially in rural areas and in areas suffering from severe economic distress, there is hereby authorized to be appropriated for each fiscal year, beginning with the fiscal year ending June 30, 1936, the sum of $3,800,000. The sums made available under this section shall be used for making payments to States which have submitted, and had approved by the Chief of the Children's Bureau, State plans for such services.

ALLOTMENTS TO STATES

SEC. 502. (*a*) Out of the sums appropriated pursuant to section 501 for each fiscal year the Secretary of Labor shall allot to each State $20,000, and such part of $1,800,000 as he finds that the number of live births in such State bore to the total number of live births in the United States, in the latest calendar year for which the Bureau of the Census has available statistics.

(*b*) Out of the sums appropriated pursuant to section 501 for each fiscal year the Secretary of Labor shall allot to the States $980,000 (in addition to the allotments made under subsection (*a*)) according to the financial need of each State for assistance in carrying out its State plan, as determined by him after taking into consideration the number of live births in such State.

(*c*) The amount of any allotment to a State under subsection (*a*) for any fiscal year remaining unpaid to such State at the end of such fiscal year shall be available for payment to such State under section 504 until the end of the second succeeding fiscal year. No payment to a State under section 504 shall be made out of its allotment for any fiscal year until its allotment for the preceding fiscal year has been exhausted or has ceased to be available.

APPROVAL OF STATE PLANS

SEC. 503. (*a*) A State plan for maternal and child-health services must (1) provide for financial participation by the State; (2) provide for the administration of the plan by the State health agency or the supervision of the administration of the plan by the State health agency; (3) provide such methods of administration (other than those relating to selection, tenure of office, and compensation of personnel) as are necessary for the efficient operation of the plan; (4) provide that the State health agency will make such reports, in such form and containing such information, as the Secretary of Labor may from time to time require, and comply with such provisions as he may from time to time find necessary to assure the correctness and verification of such reports; (5) provide for the extension and improvement of local maternal and child-health services administered by local child-health units; (6) provide for cooperation with medical, nursing, and welfare groups and organizations; and (7) provide for the development of demonstration services in needy areas and among groups in special need.

(*b*) The Chief of the Children's Bureau shall approve any plan which fulfills the conditions specified in subsection (*a*) and shall thereupon notify the Secretary of Labor and the State health agency of his approval.

PAYMENT TO STATES

SEC. 504. (*a*) From the sums appropriated therefor and the allotments available under section 502 (*a*) the Secretary of the Treasury shall pay to each State which has an approved plan for maternal and child-health services, for each quarter, beginning with the quarter commencing July 1, 1935, an amount, which shall be used exclusively for carrying out the State plan, equal to one-half of the total sum expended during such quarter for carrying out such plan.

(*b*) The method of computing and paying such amounts shall be as follows:

(1) The Secretary of Labor shall, prior to the beginning of each quarter, estimate the amount to be paid to the State for such quarter under the provisions of subsection (*a*), such estimate to be based on (*A*) a report filed by the State containing its estimate of the total sum to be expended in such quarter in accordance with the provisions of such subsection and stating the amount appropriated or made available by the State and its political subdivisions for such expenditures in such quarter, and if such amount is less than one-half of the total sum of such estimated expenditures, the source or sources from which the difference is expected to be derived, and (*B*) such investigation as he may find necessary.

(2) The Secretary of Labor shall then certify the amount so estimated by him to the Secretary of the Treasury, reduced or increased, as the case may be, by any sum by which the Secretary of Labor finds that his estimate for any prior quarter was greater or less than the amount which should have been paid to the State for such quarter, except to the extent that such sum has been applied to make the amount certified for any prior quarter greater or less than the amount estimated by the Secretary of Labor for such prior quarter.

(3) The Secretary of the Treasury shall thereupon, through the Division of Disbursement of the Treasury Department and prior to audit or settlement by the General Accounting Office, pay to the State, at the time or times fixed by the Secretary of Labor, the amount so certified.

(*c*) The Secretary of Labor shall from time to time certify to the Secretary of the Treasury the amounts to be paid to the States from the allotments available under section 502 (*b*), and the Secretary of the Treasury shall, through the Division of Disbursement of the Treasury Department and prior to audit or settlement by the General Accounting Office, make payments of such amounts from such allotments at the time or times specified by the Secretary of Labor.

OPERATION OF STATE PLANS

SEC. 505. In the case of any State plan for maternal and child-health services which has been approved by the Chief of the Children's Bureau, if the Secretary of Labor, after reasonable notice and opportunity for hearing to the State agency administering or supervising the administration of such plan, finds that in the administration of the plan there is a failure to comply substantially with any provision required by section 503 to be included in the plan, he shall notify such State agency that further payments will not be made to the State until he is satisfied that there is no longer any such failure to comply. Until he is so satisfied he shall make no further certification to the Secretary of the Treasury with respect to such State.

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Part 5.—Administration

SEC. 541. (*a*) There is hereby authorized to be appropriated for the fiscal year ending June 30, 1936, the sum of $425,000 for all necessary expenses of the Children's Bureau in administering the provisions of this title, except section 531.

(*b*) The Children's Bureau shall make such studies and investigations as will promote the efficient administration of this title, except section 531.

(*c*) The Secretary of Labor shall include in his annual report to Congress a full account of the administration of this title, except section 531.

Appendix 4.—Maternal and Child-Health Services Under the Social Security Act

FEDERAL PARTICIPATION

The Social Security Act (approved August 14, 1935), in title V, part 1, authorizes an annual appropriation of $3,800,000 for Federal grants to the States for the extension and improvement of services for promoting the health of mothers and children, especially in rural areas and in areas suffering from severe economic distress.

The annual grants to the States are allotted by the Secretary of Labor on the following basis:

Fund A (to be matched by State and local funds)—$2,820,000—$20,000 allotted to each State ($1,020,000). $1,800,000, allotted according to the ratio of live births in each State to the total number of live births in the United States. (Any balance of these allotments unpaid to a State at the close of the fiscal year remains available to such State until the close of the second succeeding fiscal year).

Fund B (matching not required)—$980,000—allotted according to financial need of each State for assistance in carrying out its State plan after the number of live births in such State has been taken into consideration.

The Children's Bureau of the Unitted States Department of Labor administers this part of the Social Security Act. Through its Maternal and Child-Health Division, which has on its staff regional, medical, and public-health-nursing consultants, consultation service is given to the State health agencies on the development and carrying out of their plans for State and local maternal and child-health services.

The 48 States, Alaska, the District of Columbia, and Hawaii are receiving such grants in accordance with plans submitted by the State health agencies and approved by the Chief of the Children's Bureau.

The Children's Bureau receives the assistance of the following advisory committees in the development of policies and procedures for the maternal and child-health program:

General advisory committee on maternal and child-welfare services.

Advisory committee on maternal and child-health services and committees on child health and maternal welfare.

Special advisory committee on public-health nursing.

Special advisory committee on dental health.

STATE MATERNAL AND CHILD-HEALTH ORGANIZATION AND ACTIVITIES

Each State department of health has a division or bureau of maternal and child health, under a medical director, which conducts the maternal and child-health program with the assistance of the bureau of public-health nursing (where organized) and other bureaus of the department.

State programs include the following activities:

Preparation of the State plan for maternal and child-health services, to be submitted in requesting the Federal grant and to be used as the basis of State administration throughout the year.

Administration of financial aid to county or other local health units. (Federal funds are being used especially in rural areas and areas suffering from economic distress).

Supervision of local maternal and child-health services.

Assistance to local units in securing qualified personnel.

Conduct of one or more demonstration services in needy areas and among groups in special need in cooperation with local health authorities. (Twenty-eight of these are demonstrations in the field of maternal care, including nursing service at delivery.)

Provision of expert obstetric and pediatric consultant service.

Provision of nutrition consultation service for State and local staff.

Conduct of postgraduate courses in obstetrics and pediatrics for practicing physicians, and of institutes and in-service training in maternal and child care for nurses, dentists, and other professional workers.

Provision of stipends for postgraduate training for State and local staff physicians and nurses, supplementing their basic training with courses in maternal and child-health service and in general public-health administration.

Supervision of midwives.

Cooperation with other State agencies, such as departments of education, departments of welfare, and home demonstration services, in programs related to child health.

Cooperation with medical, nursing, and welfare groups and organizations in the planning and conduct of maternal and child-health activities.

LOCAL MATERNAL AND CHILD-HEALTH ORGANIZATION AND ACTIVITIES

District or county health departments (where organized) and city health departments employ, under the direction of health officers, public-health nurses and other professional workers to carry on maternal and child-health services.

Pending the development of full-time county or other local health departments public-health nurses are frequently employed to conduct maternal and child-health services as a part of a generalized public-health-nursing program.

Local practicing physicians are employed, part time, to conduct maternal and child-health conferences.

Under the State plans for maternal and child-health services the Federal funds available for extending and improving local maternal and child-health services are being used for the most part, in rural areas.

The actual services rendered to mothers and children are as follows:

Prenatal conferences, including examination of the expectant mother by a physician, aided by a public-health nurse, with instructions to mothers on how to care for themselves.

Child-health conferences, at which infants and preschool children are examined by a physician, aided by a public-health nurse, mothers are instructed in the care of their children, and (in some cases) children are immunized against diphtheria and smallpox.

School health services, including examination of children by the physician, preferably with a parent present, follow-up by a public-health nurse to secure the correction of defects, and current health supervision and instruction by the teachers aided by the nurse.

Nurses' home visits to instruct mothers in the care of the health of the family, to invite the mothers to come to the prenatal conferences and to bring their children to the child-health conferences, and to aid mothers in understanding and following the physician's advice on the care of themselves and their children.

Health education for mothers through conferences, publications, and mothers' classes; for children at home and in school; and for the general public.

MATERNAL AND CHILD-HEALTH SERVICES REPORTED, YEAR ENDED JUNE 30, 1937

Reports received from the State health agencies for the year ended June 30, 1937, showed the following activities conducted under State plans for maternal and child-health services:[1]

Service			
Visits to medical conferences for maternity service			123,315
Antepartum service		110,693	
Postpartum medical examination		12,622	
Visits to medical conferences for child-hygiene service			513,651
Visits of infants		241,611	
Visits of preschool children		272,040	
Health examinations of school children			2,044,996
Immunizations for smallpox			1,346,766
Immunizations for diphtheria			771,292
Public-health-nursing visits			4,541,656
Maternity service		630,304	
Antepartum	376,690		
Delivery	7,390		
Postpartum	246,224		
Infant hygiene		819,139	
Preschool hygiene		770,236	
School hygiene		2,321,977	
Inspections by dentists and dental hygienists			961,877
Preschool children		47,299	
School children		914,578	
Midwife meetings			10,331
Midwives under planned instruction			11,561
Attendance at midwife meetings			60,327

[1] Reports for the last half of the year related to areas, mostly rural, that contain approximately two-thirds of the population of the United States. For the first half of the year the State reports were incomplete for certain items and covered fewer areas.

Appendix 5.—Recommendations With Respect to Extension of Maternal and Child-Health Services Made by the General Advisory Committee on Maternal and Child-Welfare Services, April 7–8, 1937

At its meeting on April 8, the General Advisory Committee on Maternal and Child-Welfare Services received and unanimously adopted the recommendations of the Advisory Committee on Maternal Welfare and the Special Advisory Committee on Maternal and Child-Health Services with respect to an extension of the program under title V, part 1, of the Social Security Act. The committee further recommended the submission of the report to the Chief of the Children's Bureau for the purpose of taking the steps necessary for the accomplishment of the purposes outlined.

The recommendations, which cover two special aspects of the program, namely, (1) increased and improved maternity care and care of the newborn, and (2) a program of training in these fields for physicians and nurses, are as follows:

1. Extension of the maternal and child-health work begun in 1935 through Federal cooperation with the States under the Social Security Act appears to be urgently needed. This requires appropriation of public funds for maternal care, medical and nursing, for all women in need of such care, considering need as including not alone economic but also medical needs and lack or inadequacy of existing facilities.

This extension should include not only provision of increased resources for actual maternal care, including care given locally by general practitioners and nurses, but also expert obstetric and pediatric consultation service in areas where such is not available and hospitalization of emergency and other selected cases. The establishment of such a program would involve adequate provision for three types of service:

(*a*) Care in the home at delivery and during the antenatal and postnatal periods by a qualified physician aided by a public-health nurse trained and experienced in maternal care.

(*b*) Delivery care in approved or acceptable hospitals, provided with adequate obstetric and neonatal services and facilities equal to all emergency or complicated cases, for any woman who, because of social, medical, or economic reasons, or because of inaccessibility of skilled care, should be cared for in a hospital.

(*c*) Consultation service by obstetricians and pediatricians to aid general practitioners in their care of mothers and infants.

In the development of such an extended program the right of the patient to select her own physician should be preserved.

2. It is the opinion of this committee that a center or centers of postgraduate education should be established to teach urban and rural practitioners of medicine and nurses the fundamental principles of complete maternal and infant care.

Having accepted the principle of providing short intramural courses in obstetrics and care of the newborn infant for general practitioners, the committee recommends—

(*a*) That such training positions carry maintenance and necessary traveling expenses.

(*b*) That intramural postgraduate instruction be a special assignment of members of the teaching staffs of medical schools.

3. The committee recognizes the necessity and desirability of cooperation with the National, State, and local medical societies in the working out of any plan.

GENERAL ADVISORY COMMITTEE ON MATERNAL AND CHILD-WELFARE SERVICES

Kenneth D. Blackfan, M. D., Harvard University School of Medicine, chairman.
Grace Abbott, School of Social Service Administration, University of Chicago.
Fred L. Adair, M. D., University of Chicago School of Medicine, Chicago.

*W. W. Bauer, M. D., American Medical Association, Chicago.
Substitute: R. G. Leland, M. D., American Medical Association.
M. O. Bousfield, M. D., Julius Rosenwald Fund, Chicago.
*C. C. Carstens, Child Welfare League of America, New York City.
John A. Ferrell, M. D., American Public Health Association, New York City.
F. H. Fljozdal, Brotherhood of Maintenance of Way Employees (representing the American Federation of Labor), Detroit, Mich.
Homer Folks, State Charities Aid Association, New York City.
*Amelia H. Grant, R. N., National Organization for Public Health Nursing, New York City.
Substitute: Ruth Houlton, R. N., National Organization for Public Health Nursing.
Clifford G. Grulee, M. D., American Academy of Pediatrics, Evanston, Ill.
*T. Arnold Hill, National Urban League, New York City.
Fred K. Hoehler, American Public Welfare Association, Chicago.
Arlien Johnson, University of Washington, Seattle, Wash.
*Paul H. King, International Society for Crippled Children, Detroit, Mich.
Substitute: E. Jay Howenstine, Elyria, Ohio.
Mrs. Blanche L. LaDu, American Public Welfare Association, Chicago.
Mrs. S. Blair Luckie, General Federation of Women's Clubs, Chester, Pa.
The Reverend Bryan J. McEntegart, Catholic Charities of the Archdiocese of New York.
Mrs. George B. Mangold, National League of Women Voters, Los Angeles.
Mary E. Murphy, Elizabeth McCormick Memorial Fund, Chicago (National Congress of Parents and Teachers, Committee on Child Hygiene).
Robert B. Osgood, M. D., Harvard University School of Medicine.
Mrs. Abbie C. Sargent, The Associated Women of the American Farm Bureau Federation, Bedford, N. H.
Mrs. Dora H. Stockman, National Grange, E. Lansing, Mich.
*Mrs. Nathan Straus, National Council of Jewish Women, New York City.
*Linton B. Swift, Family Welfare Association of America, New York City.
Douglas A. Thom, M. D., State Department of Mental Diseases, Boston, Mass.

ADVISORY COMMITTEE ON MATERNAL WELFARE

Fred L. Adair, M. D., University of Chicago School of Medicine, chairman.
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Alice Pickett, M. D., University of Louisville, Louisville, Ky.
E. D. Plass, M. D., State University of Iowa, Iowa City, Iowa.
Philip Williams, M. D., University of Pennsylvania School of Medicine, Philadelphia, Pa.

ADVISORY COMMITTEE ON MATERNAL AND CHILD-HEALTH SERVICES

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Ernest A. Branch, D. D. S., State Board of Health, Raleigh, N. C.
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*E. V. McCollum, Sc. D., Johns Hopkins School of Hygiene and Public Health, Baltimore, Md.
*Grover F. Powers, M. D., Yale University School of Medicine, New Haven, Conn.
Oscar Reiss, M. D., University of Southern California School of Medicine, Los Angeles, Calif.
Lillian R. Smith, M. D., State Department of Health, Lansing, Mich.
*Elnora E. Thomson, R. N., University of Oregon Medical School, Portland.
*Felix J. Underwood, M. D., State Board of Health, Jackson, Miss.

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*Not present.

Appendix 6.—Recommendations of the Conference of State and Territorial Health Officers, April 9, 1937

The conference of State and Territorial health officers, meeting with the Children's Bureau on April 9, 1937, unanimously adopted the following report of a joint meeting of the committee on maternal and child health of the State and Territorial health officers and the child-hygiene committee of the State and Provincial Health Authorities of North America.

The conference, at its last annual meeting, adopted the committee's recommendations relating to a revised plan for development of maternal and child-health programs, local programs, health services, State-wide program, and Federal participation with States.

At a joint meeting on April 4, 1937, the committees considered other timely and necessary steps in our program of maternal and child-health activities and the following recommendations were unanimously adopted:

1. That the Children's Bureau prepare and send a questionnaire relating to present facilities and resources for maternal and child health to the States and Territories.

2. That the medical schools of the country be encouraged to provide more adequate instruction in maternal and child care through their obstetrical and pediatric departments in order that their graduates may be better prepared to practice preventive as well as curative medicine and render service of such a character that the maternal death rate would be lowered and that further reduction would be made in the infant death rate, and that the assistance and cooperation of the Council on Medical Education of the American Medical Association be enlisted in the furtherance and promotion of this program by better instruction in these schools.

3. That it is necessary to extend the maternal and child-health work now being conducted in the States and Territories.

For the purposes of developing sound procedures in this field, the joint committee recommends (1) that resources be made available so that qualified local practitioners of medicine and qualified nurses be made available for all aspects of maternal care to those women who are unable to secure this service otherwise and (2) necessary consultation service and emergency hospitalization for these women should also be provided.

Medical leadership is both desirable and necessary and the right of the patient to choose her own physician should be recognized.

4. That the facilities for postgraduate education for physicians and nurses be extended and that in cooperation with the State medical societies an analysis be made of the causes of maternal deaths in order to demonstrate the need for better obstetric practice.

CHILD HYGIENE COMMITTEE OF THE STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA

Felix J. Underwood, M. D., Mississippi, chairman.
T. F. Abercrombie, M. D., Georgia.
P. H. Bartholomew, M. D., Nebraska.
T. P. Burroughs, M. D., New Hampshire.
*P. S. Campbell, M. D., Nova Scotia.
G. H. Coombs, M. D., Maine.
*J. D. Dunshee, M. D., Idaho.
W. B. Grayson, M. D., Arkansas.
V. K. Harvey, M. D., Indiana.
*Bernard T. McGhie, M. D., Ontario.
*E. G. Morales, M. D., Puerto Rico.
*F. E. Trotter, M. D., Hawaii.
Maysil M. Williams, M. D., North Dakota.

*Not present at meeting when resolutions were adopted.

COMMITTEE ON MATERNAL AND CHILD HEALTH OF THE STATE AND TERRITORIAL HEALTH OFFICERS

Felix J. Underwood, M. D., chairman.
T. F. Abercrombie, M. D., Georgia.
Earle G. Brown, M. D., Kansas.
Henry D. Chadwick, M. D., Massachusetts.
E. R. Coffey, M. D., Washington.
J. Rosslyn Earp, M. D., New Mexico.
R. C. Cleere, M. D., Colorado.
V. K. Harvey, M. D., Indiana.
R. H. Riley, M. D., Maryland.

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